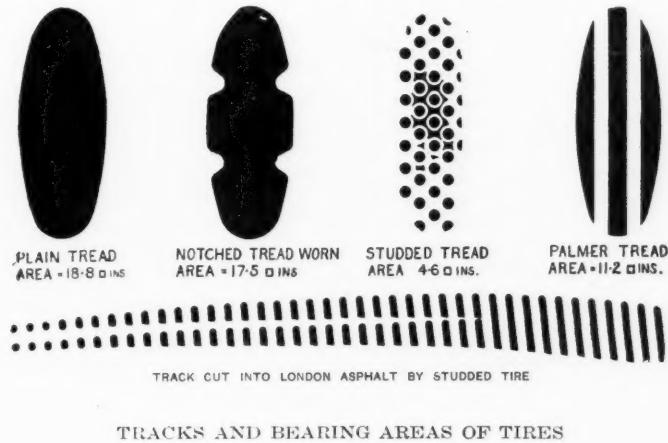


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No. 4

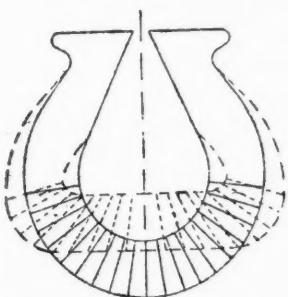


AUTOMOBILES AND ROAD WEAR

Causes of Injuries to Macadam by the Former—Suction—Slipping of Tires—Impact—Crushing—Comparative Bearing Surface of Different Tires

In a recent paper before the Incorporated Institution of Automobile Engineers of England, Douglass McKenzie has endeavored to analyze the effect of motor cars on roads. This paper treats the subject from a point of view of the automobilist, but with the idea that while agitating for better roads they should themselves remedy certain defects in automobiles which tend to injure road surfaces. The author begins by stating that the ideal contact would be that of an unyielding wheel on an unyielding surface, the nearest approach to which is found in a railway car and track. If this is true, soft tires should give place to hard ones, and as the roads are made smoother and harder pneumatic tires should give way to solid ones. Any variation from the ideal contact means loss of energy and injury to both road and tire.

The author stated that he started out with the idea that a pneumatic studded tire when in motion had a sidewise motion due to the outer rows of studs creeping slightly toward the inner row as the tire flattened under compression and moving outward again as the pressure was reduced by the tire leaving the road surface, but experience convinced him that this was not the case and that there was no sliding or



DEFORMATION OF PNEUMATIC
TIRE WHEN SUPPORTING
LOAD

creeping of the studs except when the whole vehicle slid or when not moving in a straight line. The illustration shows the action which takes place in any kind of pneumatic tire, the full lines showing the shape of the tire before compression and the dotted lines showing the same parts when resting upon the road. Each portion of the tire in changing shape moves vertically and neither inward nor outward.

The actual injuries he found to be caused by: first, suction due to bad road material; second, slip due to imperfect adhesion; third, crushing due to insufficient area of support; fourth, horizontal rotary movement due to steering or turning.

Much road destruction is caused by the suction removing the binding material. This he believes to be unavoidable in a rapidly moving vehicle, whatever the kind of tire. It also increases with the speed and with the width of tire in contact with the road. In a pneumatic tire the suction is increased, however, by the fact that the edges leave the road first, thus inducing a rush of air toward the center and causing eddies. He claims that this is caused by improper road surface, although his explanation would seem to point to the compressibility of the pneumatic tire as at least partially responsible.

The greater part of the injury to the roads, however, the author believes to be caused by the slipping backward of the tire in the line of motion due to the fact that the power transmitted to the wheel is greater than the adhesion of the tire to the road surface. He believes that anything higher than 20 horsepower for an ordinary touring car or 30 horsepower for a heavy touring car is very liable to result in destruction of this kind because the power is greater in proportion than the adhesion. This kind of road wear is accompanied by a proportional amount of wear on the tires, thus requiring more frequent renewals of these, and the author suggests a tax of 500 per cent. on the cost of all pneumatic tires sold, the proceeds to be used in road maintenance, as placing the expense of such maintenance on those who do most to make it necessary. One illustration of the wear caused by too much power on the wheel is found at the foot of and part way up steep hills, where the wear from automobiles is greater than at other parts of the same road. This is caused by the automobilist putting on all his power to make a "run" of the hill by momentum, the result being a slipping of the tires, which reaches its maximum at the foot of the hill and gradually diminishes toward the top.

Another source of injury is due to the impact of the tires, which occurs when a car travels at high speed over

an uneven road, the effect of this impact being heightened by the tendency of the wheels to race while in the air, the car meantime having slowed down somewhat, the result being attrition at the point where the tires light.

In connection with the crushing of roads, Mr. McKenzie calls attention to the fact that while regulations of the width of steel tires have been made, there seems to be a general impression that the pneumatic tire always gives a considerable area of support. This he believes is far from being the case, as is indicated by the depressions left in some roads by automobile tires. Steel studs considerably reduce the area of support until they have penetrated to such a depth that the body of the tire rests upon the road. In fact, if such tires did not crush into the road they would be of little service in the way intended. The author claims, however, that no roads should be made so soft as to be deformed or rutted under an automobile tire. The presence of loose stones on the road, by concentrating the entire weight upon a small area, as a wheel passes over them, are important agents in destruction by crushing.

Tests were made of the bearing surface of several types of tires. Each tire was 880 mm. by 120 mm. and all were blown up equally hard and supported the same load. The illustration at the head of this article shows impressions taken by a road surface during these tests. Since a considerable increase in the length of the area of support can be obtained for a comparatively small increase in the diameter of the wheel, the practice of

using wheels of such small diameters on motor cars is extremely unfortunate.

It was found that considerable serious abrasion was caused wherever a car diverted from a straight line, the surface of the road being actually torn up by the tires. The author found a track cut out of hard asphalt to a depth of one-eighth of an inch by a studded tire, as shown in the illustration. Consideration of what takes place shows that the better the adhesion between tire and road surface the greater will be the injury to the road from turning, although that from slipping or skidding will be less.

Another cause of destruction of roads by heavy motor cars is the lack of suitable foundation, because of which the entire thickness of the road is crushed down by the heavy loads imposed by touring cars. This cannot be remedied by any method of treating the surface, but only by providing heavy Telford or possibly concrete foundations.

The author also calls attention to the fact that too great crowning of a road results in concentration of traffic at its center and thereby confining the wear to that point.

The conclusion appears to be that the greatest injury is done by cars whose high power is out of proportion to the adhesion of their tires. Also that much injury can be avoided by laying out roads as straight or with as flat curves as possible and by providing adequate foundation for the heaviest automobiles.

SEWERAGE STATISTICS

COLLECTED BY SANITARY SECTION OF BOSTON SOCIETY OF CIVIL ENGINEERS

DISPOSAL												SEWAGE BEDS OR FILTERS														
Reference Number	No. of Tanks	Settling		Septic		Chem. Precipitation		Av. Daily Quantity of Sewage Treated (Gallons)		Av. No. of Hours Sewage is in Tanks		Disposition of Effluent		Disposition of Sludge		Cu. Yds. Sludge produced per Million Gals. Sewage	Cost of Tanks	Cost of Maintenance, including Cost of Disposing of Sludge	Kinds and Quantities of Chemicals used per Million Gallons	Type	Date of Construction of Works	Cost of Beds	Total Net Filtration Area (Acres)			
		Treatment on sand filters	Fertilizer at sewer farms	Treatment on sand filters	Sludge beds	Every week	Twice daily	1 in 2 weeks	1 in 2 mos.	1,050.00	5,983.00	1,175.92	3,500.00	4.44	Once yearly											
6 2 Gardner	10,500																									
4 Templeton	166,850																									
8	2	60,500	144,000	12																						
13	2	8,100	520,000	0.75	Treatment on sand filters	Sludge beds																				
17																										
18	2	136,468	243,799	13.4	Treatment on sand filters	Earth cov'd dump	12.06	Twice daily		3,500.00																
19	4	1,350,000	1,000,000	11	Contact beds	Fertilizer	4.44	Once yearly																		
24	15 (f)	5,500,000	11,660,000	4 to 8	Blackstone River	Pressed, dumped	4446	Roughing 2-4 weeks; others, 4-8 weeks	265,628.75	38,909.19	912 lbs. lime															

(a) Including land.

(b) With allowance for slip.

(c) Includes septic tanks.

(h) Two areas, one in Gardner, one in Templeton.

(e) Without allowance for slip.

(f) For experimental purposes.

*Georges Creek.

SEWERAGE STATISTICS (Continued)

SEWAGE BEDS OR FILTERS (Continued)

Reference No.	Number of Beds	Average Area of Beds (Acres)	Character of Filtering Material	System of Under-drains	Depth	Distance Apart	Average Daily Quantity of Sewage Treated (Gallons)	Average Daily Quantity of Sewage Treated Per Acre (Net Area)	Maximum Daily Quantity of Sewage Treated (Gallons)	Preliminary Treatment	Dosing Apparatus and Size of Dose (Gallons)	How long does Sewage flow on One Bed?	How Often is Each Bed used?	Method of Caring for Surface of Filters, Number of Times Raked, Plowed, etc.	Cubic Yards of Material Removed from Surface of Beds	Cost of Removing Same	Are Crops Raised? If so, what kind?	Total Cost of Maintenance	Cost of Maintenance per Million Gallons Filtered	Water Capacity of Contact or Trickling Filters and Decrease in same since Plant was Started
6 12 20	o. 125 o. 25	Yes			4 $\frac{1}{2}$ 3 $\frac{1}{2}$	20 27				Set. tks., Coke str'ners		6 h. b d., 12 at nt.	About ev.oth. day	Once per year	120 36	\$90.00 48.00	No			
8 4 .587	Yes	Sand and gravel			6'							2 hour	Every 24 hours				No			
13 18 0.7	Yes	o. 14			6'	50	582,000	52,000	1,490,000	Set. tks., and screens	360,000	8-16 hours	3 or 4 times per m.	Thor. cl. 3 times a year	770	231.00	Corn	\$919.95	\$3.74	
17																				
18 16 .15 to 3	Yes	o. 17			5	20	157,461	46,891	209,000	Settling tanks	By hand 100,000 gallons		Every 24 to 72 hrs	Scraped twice an. and fur'd once	1,170	1,240.20	No			
19 16 o. 22	Yes	Broken stone, slag, clinker; 4" to 1 $\frac{1}{2}$ "	5" tile radiat'g from gate, chamber		1,000,000	378,000	1,400,000			Screened and passed thr'gh 2 sep. tks. success'y		2 hrs.	Twice daily	Raked around dis-tributors monthly		About 180.00	No	1,987.61—	5.45	125,000 to 4 150,000 gallons (d)
24 43 0.99	Yes	Av. 14 b'ds o.23 mm. Av. 9 b'ds o.16 mm. Av. 8 b'ds .20 mm.			5	45	2,990,000	83,000	9,200,000	Through grit chamber 40' x 10' x 10'	Contr'l'd by gate valves on main dykes and molasses gates at distrib. (g)	2-4 hours	1-4 times weekly	Raked near dis-tributors every 2-4 weeks; rest every 4-8 wks.	19,426	7,750.00	No	11,603.81	10.62	

(d) Decrease 43 per cent. in four years. (g) Deposit removed three or four times a year.

IN the July 8 issue we published a table giving data concerning the Collection of Sewage and the Quantity Discharged in twenty-four cities, as collected by the Sanitary Section of the Boston Society of Civil Engineers. This week we add data concerning Pumping and Disposal of Sewage in the same cities. In a following issue we will present the Financial Statistics, thus completing the information compiled by this society.

The reference numbers used in these tables are the same as those printed in the July 8 issue. For convenience we repeat such as are referred to this week. No. 6, Gardner, Mass.; No. 8, Hopedale, Mass.; No. 13, Marlborough, Mass.; No. 17, Newton, Mass.; No. 18, Pawtucket, R. I.; No. 19, Plainfield, N. J.; No. 24, Worcester, Mass.

Pagoda-shaped Roofs for Standpipes

EDITOR "MUNICIPAL JOURNAL AND ENGINEER,"
231-241 W. 39th St., New York City.

DEAR SIR:

I notice on page 50 of the July 8 number of MUNICIPAL JOURNAL AND ENGINEER, an article entitled "A Novel Stand Pipe Roof," with a picture of the stand pipe built in 1906 for the U. S. Navy Department at Lake Denmark, N. J. The construction of this roof with the balcony and spiral stairway appears, from the illustration, to be very similar to that of the 30-inch x 100-inch stand pipe erected at Des Moines, Iowa, for the Des Moines Water Company, in 1889. The Des Moines stand pipe and roof were designed by Chester B. Davis, of Chicago, Ill., and was illustrated in *Engineering News* some time after its erection. It was, I believe, the first roof of the kind ever used on a stand pipe.

Yours truly,

Wilkinsburg, Pa.,
July 11, 1908.W. C. HAWLEY,
Chief Eng. and Gen'l Supt.,
Pennsylvania Water Co.

Street Patrol Tricycle

A NEW device is being used experimentally by the New York Street Cleaning Department for the collection of loose papers on the street. Its main features are shown in the accompanying illustration. A tricycle, operated by foot power from a seat in the rear, carries a light sheet metal can. This can has an open top into which the attendant can thrust any paper he may pick up. In front are doors in two sections which are opened when it is desired to remove the contents. When the can is filled and the contents are thus removed they are placed by the attendant in a curb can.

No accurate figures are yet available relative to the actual effectiveness of this device. Although it would



STREET PATROL TRICYCLE IN NEW YORK

SEWERAGE STATISTICS (Continued)

Reference No.	DESCRIPTION OF PLANTS	PUMPING											
		DISC. OF FUELS OR POWER USED.				FUEL FOR INT. COMBUSTION ENGINES				YEARLY AMOUNT OF FUEL OR POWER USED			
		COAL		FUEL FOR INT. COMBUSTION ENGINES		YEARLY AMOUNT OF FUEL OR POWER USED		TOTAL GALS. PUMPED FOR YEAR WITH OR WITHOUT ALLOWANCE FOR SHIP		AV. STATIC HEAD AGAINST WHICH PUMP WORKS, IN FEET		AV. DYNAMIC HEAD AGAINST WHICH PUMP WORKS, IN FEET	
		Kind	Brand	Av. Cost per Gross Ton Delivered	Per Cent. of Ash	Kind and Grade	Av. Cost per Gal.	Electricity, Av. Cost per K. W. Hour					
6													
8	No. 6 Centrifugal pump	Power furnished by main power plant of the Draper Company							50,000,000 (e)	22			
13	2 Warren Steam Pumps Cap. 20,000 gals. per hour	Bit-um. *	\$5.10			11.8 tons	3,245,000	56	68	7,700 per lb. of coal	\$0.27	Vertical $\frac{1}{8}$ " steel bars $\frac{1}{4}$ " on centers	
17	One plant consisting of two $3\frac{1}{2}$ " centrifugal pumps operated by two 6 horsepower gasoline engines.			Gasoline $\frac{1}{2}$ Test	\$0.155	1,202 gal. gasoline	9,629,434 (f)	28.75	34.85	230,321	1.42	1" mesh woven wire basket	
18													
19													
24	No. 1. Vert. Cent. Pump connected by bevel gears to electric motor. No. 2. Shone System compressed air, one lift. No. 3. Like 2, three lifts.				\$0.06	No. 1. 2,881 k.w. " 2. 5,801 " " 3. 29,092 "	32,900,000 7,250,000 7,000,000 (e)	No. 1. 7.62 " 2. 41.75 " 3. 185.3	No. 1. 66,500 " 2. 52,200 " 3. 54,300	2.17 Static	No. 1 has small basket screen Nos. 2, 3 no screens		

seem as though some time would be saved, this will be to a certain extent offset by that required for getting off the machine to pick up each piece of paper. Five round trips a day on Broadway between Twenty-third and Fifty-ninth streets have been made. The apparatus is manufactured by the Consolidated Manufacturing Company of Toledo.

Prevention of Typhoid Fever

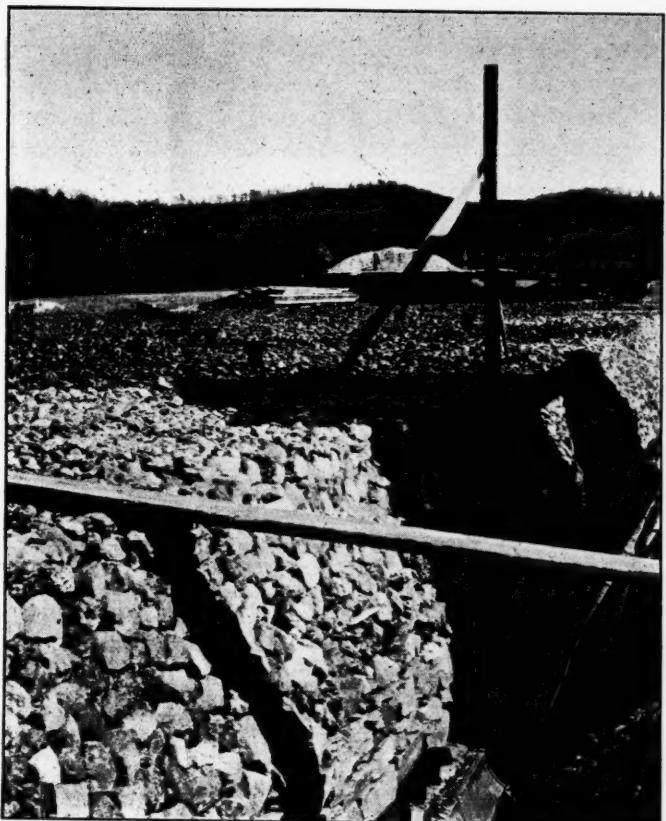
It has been found difficult and in several cases practically impossible to discover the source of typhoid fever epidemics; but this is by no means always the case and prompt action by the city authorities may effect the saving of many lives. An illustration of this is offered by the experience of Altoona, Pa., in 1907. During that year there were 95 cases of typhoid fever, all but nine of which appeared late in the summer or during the fall, as usual. In August ten cases were reported from one locality and after an investigation in which all other sources were eliminated it was decided that contaminated milk was the cause. The furnishing of this milk was immediately ordered stopped and this was followed by an abatement of the disease. During October an outbreak of typhoid reaching 21 cases in two weeks occurred in a portion of the Sixth Ward among workmen employed at the South Altoona shops. In the course of the investigation of this outbreak it was learned that during the summer an extra supply of water, independent of the reservoirs at Kittanning Point, had been furnished

the section involved. A visit was at once made to the source of this supply and a careful inspection of the stream from which it was taken showed very great danger of pollution, especially during heavy rains. The use of this water was immediately discontinued and the mains were thoroughly flushed. The result was that but one case of the disease appeared after this action had been taken and the incubation period had passed.

taken and the incubation period has passed. The prompt taken and the incubation period had passed. The prompt action of Altoona's officials might well set an example for those of other manufacturers.

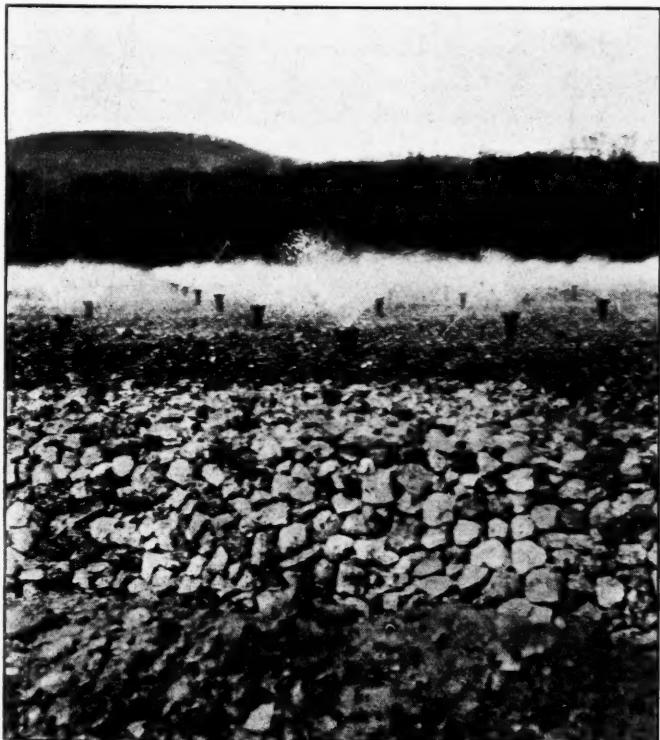
READING'S SPRINKLING FILTERS

In the MUNICIPAL JOURNAL AND ENGINEER for November 6, 1907, the new sewage purification plant for Reading, Pa., was described in some detail. We are able to present this week photographs giving a near view of the beds, from which may be obtained a pretty good idea of the size and shape of the stones employed as filtering material; and also a view of the sprinklers at work. As many features of this plant are novel and must be experimented with and adjusted before they can be expected to reach their highest efficiency, any data as to percentage of purification or analyses of the effluent at this time might be misleading. It may be said, however, that the plant is giving very good satisfaction. Some criticism has been made of the effectiveness of



SPRINKLING FILTER COMPLETED

the form of sprinkler adopted, but as far as we can learn no sprinkler has yet been designed which has been generally admitted to be satisfactory. This is a feature which invites the attention of the inventor. We should not be surprised if an entirely new departure in the way of distributing the sewage over such beds is found before long which will excell any of the fixed or movable distributors now in use.

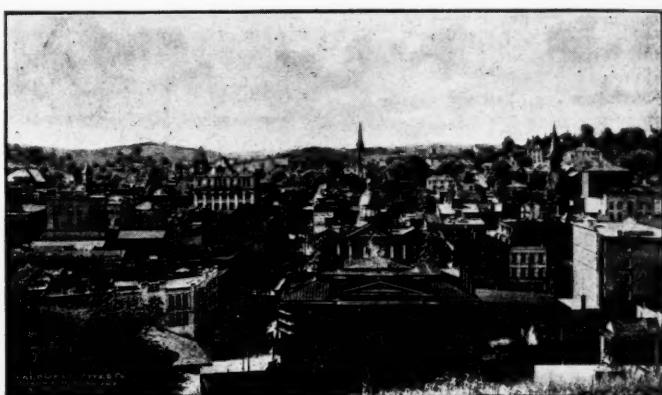


SPRINKLERS IN OPERATION

STAUNTON'S CITY GOVERNMENT

A General Manager with Entire Control of City's Executive and Administrative Affairs—Comparison with Galveston Plan

A CITY with a general manager is a new development in municipal government and the success or failure of such an idea will be watched with great interest by the scores of cities which are casting about for an improvement over their own present plan. Staunton, Va., had an ordinarily efficient city government. No charges of dishonesty had ever been made against any of its officials, who were all public spirited citizens. As is usually the case in smaller cities, however, they had their own private affairs to attend to and could not always devote as much time to the city's interest as would be desirable. It was believed that a better form of government could be devised and a committee was appointed for this purpose, which looked into the various forms of government in use, being especially attracted by the general idea of the commission form of government. They found that the constitution of the State necessitated the retention of a Council of two bodies and the exercise by it of certain fixed and enumerated functions; which effectually prevented the adoption of the Galveston-Houston plan. They, however, suggested a method of preserving the essential features of this, and even of improving upon it in their opinion.



BIRD'S EYE VIEW OF STAUNTON, VA.

The plan which they recommended is as follows:

Instead of having a Board of Commissioners elected by the people, let the City Council appoint as Commissioner some competent and suitable man, and delegate to him the entire control and management of the city's executive and administrative affairs, making the duties of his office exactly those of the Board of Commissioners under the Galveston-Houston plan. The official thus appointed will give his entire time and attention to the various departments of the city's business, will receive an adequate salary to be prescribed by the Council, will discharge in general all of the executive and administrative duties now appertaining to the City Council and its various standing committees, and will hold his office at the pleasure of the Council.

Ample authority for the appointment of such an official is found in section 30 of our City Charter, and in section 1038 of the Code of Virginia, in both of which it is expressly provided that the City Council, in addition to other enumerated officers, may also appoint such other officers as it deems necessary and proper, and define their powers, prescribe their duties, and fix their compensations.

It will be observed that your Committee suggests the appointment of only one such officer. This, in the opinion of your Committee, will be all that is necessary for a city of this size. One competent, active, and careful business man, devoting his entire time to the work, should be able to discharge the duties of the office and obtain the best results in each department. It will be, of course, necessary that this officer should employ a clerk to keep the books and attend to the usual routine office work, as the Commissioner or Director will be continually engaged outside of his office in looking after the various work in the different departments.

The only differences between the plan above outlined and the Galveston-Houston plan are:

- (1.) That the officer is appointed by the Council instead of being elected by the people.
- (2.) That the executive and administrative work of the city would be in the hands of one instead of five men.
- (3.) That the executive and administrative functions would be entirely separated, not only as respects the capacity in which they are discharged but also as respects the persons by whom they are discharged.

The first of these differences is in favor of the plan we suggest, inasmuch as the officer would be directly responsible to the Council, which could exercise a constant supervision over him and his work, and when necessary remove him at its pleasure. The danger of having an official dependent only upon popular favor for his election and holding an office of fixed tenure would be obviated.

The second difference is in reality no difference at all, but merely an adaptation to local conditions.

The third and last difference is decidedly in favor of our plan. Under the Galveston-Houston plan, the five officials, although exercising the powers in different capacities, possess in their own persons *all* of the powers of government, and are subject to no supervision or restraint whatever, while under our plan we have the elective body discharging all of the legislative functions of government, and maintaining over the appointive officer, charged with the exercise of the executive and administrative functions, a constant control and supervision. The importance of this difference cannot be overestimated, as all danger arising from a too great and unrestrained centralization of power is effectually prevented.

Your Committee recommends, if this plan be adopted, that the standing committees of the Council, as at present constituted, be continued to act as advisory bodies to confer from time to time, as may be necessary, with the Commissioner, and suggest and report to the Council such ordinances and resolutions as may be necessary in the line of their respective departments. The Auditing Committee would, of course, continue to discharge its present duties.

Relations between the Commissioner and the Mayor and City Council are very similar to those between a General Manager of a private corporation and its President and Board of Directors. The Commissioner should be, the Committee thought, a man who not only had executive ability, but who also was familiar with the engineering side of affairs. They chose C. E. Ashburton, C. E., formerly assistant city engineer of Richmond, and who has had considerable experience as a municipal and railroad contractor. Mr. Ashburton has held this position for a few months only and the working of the system cannot as yet be more than predicted.

When asked about the duties of his position, Mr. Ashburton replied that it was a hard question to answer, as they were so numerous. He has entire supervision of all city work and the city expects to do its own construction work instead of contracting for it. He does all purchasing, makes all contracts (those in excess of \$100 must be ratified by the Council), issues building permits, looks after the physical property of the city, has charge of the various departments, the public buildings, care of parks, etc., control of the lighting plant, the water works and other minor public utilities. It is of course necessary that he have assistants, among them being the Superintendent of Electric Lighting, Superin-

tendent of Water Works and Superintendent of Streets; but he is the responsible head of all.

A complete system of vouchers, permits, audit system, etc., has been prepared to the end that the books may at any time show the exact condition of the city's finances and physical affairs. The General Manager, citizens and Council appear to be working with a harmony which augurs well for the ultimate success of the plan.

A brief statement of some of the municipal utilities may not be out of place here. The electric light system contains 90 open arc lamps, to which number 50 are to be added; 26 20-c.p. incandescents and 48 50-c.p. incandescents. The salary list of this department is \$2,580 a year and an annual appropriation of \$5,000 is made. No complete and separate account of costs of operation in the past are available, but the new system of bookkeeping will supply such in the future.

A similar lack of data exists in the Water Department. The last annual report states that an appropriation of \$9,700 was made and an additional \$1,000 for meters. The salary list was \$2,700 and the income of the department \$18,700. There are 1,800 services and the consumption is about 11-4 million gallons per day, or 137 gallons per capita. Only 100 of the services are metered at present, but it is expected to meter all of them as soon as possible; which Mr. Ashburton hopes will cut the consumption down to 50 or 60 gallons per capita.

The City Dispensary in Houston, Tex.

The city of Houston, Tex., has a municipal dispensary representing an investment of \$125, at wholesale figures. There are two rooms,—one 12 x 12, where patients and persons needing medicine are received, and one 6 x 12, where supplies are kept and prescriptions prepared. A dispensary clerk, together with the city Health Physician and another doctor, care for all those applying for assistance, at a minimum of cost. Commissioner Jas. A. Thompson, chief of the Health, Water and Light Department, is authority for the statement that, whereas under the old method of contracting with local druggists the city's bill for drugs used often to amount to \$150 and sometimes to as much as \$300 a month, now \$50 will keep the supply of drugs replenished for a whole year. At the same time, people are kept out of the hospital by a little preliminary care on the part of the City Physician with his dispensary; and whereas hospital bills,—the city has no hospital of its own,—used to run between \$200 and \$500 a month, now, by special care and an arrangement with the Sister's Hospital, whereby each patient costs only \$18.60 a month, the monthly limit of \$150 is never exceeded.

School children are vaccinated free, except that a fee of ten cents is charged for the vaccine point, and from 1,000 to 1,500 children a year are treated. Before the city began its free service the regular doctor's fee for vaccinating was \$1.00.

These improvements and economies have been realized since the change to commission form of government.

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It is further requested that our Subscription Department be notified if copies are not received promptly.

Readers are invited to contribute to the MUNICIPAL JOURNAL AND ENGINEER, either in the form of special articles or of letters discussing matters of current interest.

It is also desired that the facilities furnished by the reference library in this office should be widely known and freely used by those interested in municipal affairs. Visitors will be welcomed and provided with conveniences for search, and inquiries by mail will be promptly dealt with.

JULY 22, 1908

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Rowdyism in Playgrounds

THE appearance on two successive days in the papers in two cities as far apart as McKeesport, Pa., and Cincinnati, O., of editorials calling attention to existing rowdyism in the city playgrounds would seem to indicate the existence of an imperative need in many cities for better control of these annexes to the park system. Nor is this confined to the playgrounds only, for at about the same time the police in Brooklyn were compelled to begin a crusade against rowdyism and vandalism in Prospect Park in that city.

To provide a general meeting place for all classes and one which will probably be frequented by great numbers, and then to allow its use without any restraint whatever, is to invite trouble of this kind, since in every city there is a small percentage of the population which takes pleasure in creating just such trouble as is here referred to. A year or two ago one of the playgrounds in New York was allowed to reach such a condition of rowdyism, obscenity and immorality that it became a crying evil much worse than its entire absence would have been. The Police Department was finally persuaded to give the matter adequate attention and a special officer, chosen for this particular duty, was placed in charge, with the result that in a few weeks conditions were entirely changed and the park became the blessing it was intended to be to the right-minded and those who especially needed the benefits of fresh air because of bodily weakness or youth.

We would not wish to see the number of playgrounds now in use diminished by a single one, but would rather see them increased many fold in our cities; but when they are established or accepted by a city, the necessity for adequate oversight should be realized and provision made for both the presence of an instructor who can look after the younger children and teach them how to obtain the fullest benefits from the advantages which it offers, and there should also be provided a representative of the law for controlling the more boisterous and the lewd which may and undoubtedly will, unless restrained, frequent the grounds and exclude from the use of them those for whose benefit they were intended.

Removing Ashes and Rubbish in Philadelphia

THE experiment is being made in Philadelphia, Pa., of removing ashes and rubbish from the downtown districts by means of cars, using the street railway tracks. The contractor for collecting and disposing of the city's refuse has arranged with the rapid transit company for the removal in this way of material collected in the section between the Delaware and Schuylkill rivers and from Poplar street on the north to South street on the south, an area containing approximately four square miles, paying for this service \$10,000 per month. From 700 to 1,000 cubic yards are collected from this district each day. It is proposed to add other areas should the experiment prove successful and economical.

In the center of this collection district a receiving station has been constructed on a plot of land 150 feet square, the building containing an elevated floor reached by an inclined roadway or ramp, the wagons being assisted up the ramp by a motor-driven winch. On reaching the elevated floor the wagons dump their load on an inclined surface covered with plate steel, down which it slides directly into hopper cars on the tracks below. Eight special cars have been built by the rapid transit company, each with a capacity of 32 to 35 cubic yards, the bodies being about 35 feet long with sides 7 feet high and having V-shaped bottoms to facilitate dumping. (In Brooklyn, where a similar method of transportation

has been used for some time, the material is transported in large buckets which rest upon the wagon bodies and which are handled at the dumping grounds by hoisting apparatus.) The sides of the cars are formed of four pairs of double side-swinging doors, held in position at both top and bottom by catches which can be released altogether by gang levers. The cars are of wood lined with steel on the inside, and are mounted on two trucks. Four 75-horsepower railway motors are used for operating them.

The material is being transported to where the new Torresdale boulevard is undergoing construction, about five miles north of the receiving station, and to the low lands adjoining it. The cars are run onto temporary trestles fitted with a bracket trolley which are extended as the fills advance. The transportation of the material is confined to the night, beginning at about 7:30 P.M. The cars are usually run in pairs at intervals of about thirty minutes and the service continued until 4 to 7 o'clock in the morning.

POUGHKEEPSIE'S WATER FILTERS

POUGHKEEPSIE, N. Y., was the first city in this country to adopt water filtration on a large scale, which she did by constructing a sand filter bed having an area of two-thirds of an acre, which was designed by Kirkwood and put into operation in 1872. This plant being the first, and accomplishing results which had not previously been obtained in this country, has been looked upon with veneration which it for some time offered little reason for except its age. The various superintendents and chemists who have had it in charge have, from time to time, improved upon various features and recently considerable changes have been made to bring the plant up to modern standards.

The original filter was built in two sections with the idea of operating the beds separately, but the leakage through the division wall was so great that it was necessary to operate it as one unit. In 1895 a second bed having the same area as the first was constructed without a division wall, this being omitted largely for the sake of economy. In 1904 the Superintendent of Public Works recommended that a division wall be built across the new filter bed and that the division wall of the old be rendered water tight; also that both filters be covered. These changes were effected in 1905 and at the same time the bottom of the old filter was raised to the level of the new one. The superintendent's report upon this was: "The old filters were each 200 feet long by about 73 feet wide inside and the under drains consisted of two feet in depth of angular stones from 4 to 8 inches in size, traversed by one longitudinal and two transverse drains two feet square, of large stones. In removing this mass of stones, gravel of all sizes and sand were found throughout the entire depth.

"The space occupied by the stones to a depth of two feet was filled with puddle of blue clay and fine sand, the proportions varying with the character of the ma-

terials. The puddle was mixed and placed in layers about 8 inches thick and well rammed. Each layer, except the last, was covered with the angular stones which were rammed into the puddle before the next course was placed. This was done to dispose of the stones as well as to lessen the amount of puddle material required. The surface of the puddle was brought up to within 6 inches of the newly-laid floors of the new filters. A concrete floor 6 inches thick at the centers between piers and 12 inches under the piers was constructed in alternate squares on the puddled surface. The side walls were lined throughout with concrete 12 inches thick, reinforced by 1-2-inch twisted steel bars set vertically 18 inches between centers; also three horizontal 3-4-inch rods extending entirely around each basin. Piers and a groined arch roof were also built."

The transverse wall across the new filter was 2 feet wide at the top and 3 feet 4 inches wide at the bottom, dividing the filter into two equal beds, each having a filter area of 14,321 square feet or 0.3287 of an acre. The bottom of this filter had shown leaks and was repaired. The old concrete bottom was covered with a thin coating of liquid asphalt applied hot and burlap was stretched upon it. Hot asphalt was then poured over this until the whole was one-half inch thick. This coating extended one foot up the side walls. The new concrete bottom was 9 inches thick at the piers and three inches in the centers between piers. The piers were 18 inches square, enlarged to 24 inches square at the bottom for a height of two feet. They were spaced 10.7 feet between centers each way. The arches are elliptical and have a rise of two feet with a thickness at the crown of 0.5 feet and at the piers of 1.4 feet. The roofing over the old filter was constructed in the same way.

It is interesting to note that in 1904, before the filter was covered, the cost of removing ice and snow and cleaning was \$4,216.69, while the cost for the twelve months after covering was \$789.30. After covering, ice formed on the surface to a thickness of less than one inch and was removed at times of cleaning.

Considerable difficulty had been experienced for some time in keeping the filters in good working order, owing to the large amount of suspended clay carried by the Hudson River at certain periods. To remedy this a coagulating and sedimentation basin was built in 1907. This is 267 by 150 feet inside dimensions. Temporary wooden baffle walls were constructed with the idea of experimenting to some extent before making the walls permanent. This basin has been in operation about six months and it has been found that most of the deposit occurred in the first third of the basin; it is therefore probable that a number of baffles in the remaining two-thirds will be removed. Coagulant in the shape of sulphate of alumina is introduced into the water in the suction pipes of the pumps and is in consequence thoroughly mixed with the water by them. Before the introduction of the coagulating and settling basin it was necessary to clean the beds about 12 to 14 times a year. This period has now been lengthened to an average run

of 38 days, with a total purification of 68 million gallons between cleanings.

It will apparently be necessary to run the coagulating basin only during the periods of oily water, and at those times a reciprocating pump is used. During the rest of the year the water is pumped directly to the filters by a centrifugal pump belted to a gas engine. This engine receives its gas from a producer plant.

The gas producer is a 50-horsepower suction producer made by R. D. Wood and Company of Philadelphia. The gas engine is a 35-horsepower, vertical, two-cylinder engine built by the Westinghouse Machine Company of Pittsburgh. The centrifugal pump is a ten-inch volute with inclosed impeller, made by Henry R. Worthington, of New York, and is connected to the engine by a 12-inch belt, the distance between centers of pulleys being 28 feet. The diameter of the impeller is 28 inches and the speed 450 revolutions. After installation a test was made, which is summarized below. The fuel used in the producer was anthracite pea coal of the quality ordinarily used at the pumping station and cost \$3.26 per ton.

RESULT OF TEST

Duration of test in hours.....	24
Total cubic feet of water pumped.....	427,856
Total gallons of water pumped.....	3,200,362
Number gallons per minute.....	2,222.46
Number pounds of water per minute.....	18,521
Total lift of pump in feet.....	38.73
Net H.P. required.....	21.73
Combined efficiency of pump and belt determined from test of engine.....	.56
Estimated efficiency of centrifugal pump.....	.61
Estimated loss by belt.....	.05
Horsepower developed at shaft of engine.....	38.8
Total pounds of coal consumed.....	1,151.
Pounds of coal per hour.....	47.95
Pounds of coal per H.P. hour.....	1.23
Duty of entire plant is	
$3,200,362 \times 8.33 \times 38.73$	= 89,211,691 foot-pounds per 100 pounds of coal.
11.51	

Scoria Paving Blocks

A PAVING material which is comparatively new and concerning which little has been heard is being tried in the city of New York and has been in use for some time in Washington, Baltimore and Philadelphia. This consists of blocks made of scoria or iron slag, the hot slag from the blast furnaces being run into molds. The blocks are ordinarily made 8 by $3\frac{1}{2}$ inches by 3 to 4 inches deep, and either with or without chamfered edge. After being cast, the blocks are removed to annealing kilns. The annealing changes what would otherwise be a brittle, vitreous block into an opaque, stone-like substance, generally light brown or pink. This color is confined to an outer skin, and if this is later worn away the color becomes similar to that of blue porcelain. Scoria blocks are now being manufactured in this country, although a number of those used heretofore have been imported from Scotland. The blocks are hard and durable and the surface even and smooth; being cast in molds, their form is true and they can be laid with a uniform, even surface and close joints, thus avoiding much of the noise found in granite block pavements and also permitting more com-

plete cleaning by either broom or flushing. It is said also that these blocks do not wear off at the edges, which gives a turtle back surface, but rather wear down uniformly like sandstone paving blocks. The weight is about the same as that of granite blocks, the durability is believed to be equally as great and the cost per square yard is said to be less.

This kind of pavement is applicable to heavily traveled streets and other locations where granite would be employed.

Pavement Guarantees

AMONG the legal news published by us on May 6 was the decision in the case of Bradshaw *et al. vs. City of Jamestown*, wherein it was ordered that, since the city charter required the abutting property owners to pay the cost of constructing the original pavement only, the city to bear all expense of repairs, a contract which called for a guarantee for a period of years longer than a properly laid pavement should endure without repairs, was void, since maintenance for a longer period was really repairing and could not be assessed upon the property owners; and that the burden of proof of the justness of the length of guarantee required lay with the city.

Similar decisions have been rendered in at least one or two other cases, and these offer one more argument in favor of abolishing long-term guarantees. The first guarantees for asphalt pavements were in general for five years. Later a number of cities required longer guarantees, some even fifteen years. The tendency of the last year or two, however, has been to return to the five-year guarantee, several cities requiring less than this and a number requiring no guarantee whatever. The General Asphalt Company, in its annual report, just issued, gives the following table to show the average length of guarantee of the asphalt pavements laid by it during the past five years:

	Average Length of Guarantee	Percentage with No Guarantee
1903.....	7.5 years	4 per cent.
1904.....	7.3 "	6 " "
1905.....	7.5 "	5 " "
1906.....	7.3 "	9 " "
1907.....	5.4 "	26 " "

This report contains the following statement:

From 1890 to 1900 guarantees were given under an inadequate conception of the risks involved in the continuing obligation thereby imposed over a long term of years. These guarantees were accepted for the purpose of securing an immediate profit in the construction of the pavement and without sufficient experience or data to form a reasonable estimate of the cost involved in the guarantee. These long-term guarantees are now gradually expiring, the last 15-year guarantee having been taken in 1901. The company now confines its contracting operations to pavements of shorter guarantee and favorable traffic conditions.

Cities have found out from experience that if a pavement is improperly constructed, a long guarantee, even if accompanied by bond, is an unsatisfactory means of assuring its proper repair. Obviously the best assurance that a city can have is a pavement properly constructed at the outset, and this view is now resulting in a gradual shortening of the term of guarantee, with its reduction in cost of the pavement, and, in many cities, of waiving entirely the requirements for any guarantee.

The effect of this change of policy is to improve the general character of pavements constructed, and at the same time to relieve responsible contractors from the necessity of setting aside a large fund for contingent future liabilities.

NEWS OF THE MUNICIPALITIES

Divers Subjects of General Interest and Their Treatment by City Councils and Officials—Streets, Water Works, Lighting and Sanitary Matters—Police and Fire Items—Government and Finance

ROADS AND PAVEMENTS

Twenty Miles of Paving in One Year

Atlanta, Ga.—In a statement to the Street Committee, Commissioner of Public Works H. L. Collier announced that during the present year the Department, using convicts as laborers, had paved over twenty miles of streets. He also stated that 125 carloads of chert had been ordered to be used in further street paving. Mr. Collier showed that his Department had also laid six miles of sewers. The Street Committee was of the opinion that the record was an unusual one in view of the fact that the operation of the prohibition law had cut down the stockade working force almost 50 per cent. and the appropriation of this year to the Department of Public Works was much lower than that of last.

Bitulithic Company Will Finish Brick Job

Columbia, S. C.—The trouble regarding the contract for paving Main street with brick which resulted in the abrogation of the contract has resulted in an arrangement with the Atlantic Bitulithic Company to pave the street with bitulithic at an expenditure of \$154,000, the same as it would have cost if finished with brick. Representatives of the company are already on the ground making arrangements to push the work to an early finish.

City Attorney Complains of Wooden Sidewalks

Detroit, Mich.—In submitting the annual report of the Law Department, Corporation Counsel Timothy E. Tarsney says: In view of the bad condition of the many hundred miles of defective wooden sidewalks still remaining in the city, and the frequency of accidents, and the increased number of claims presented therefor, it is gratifying to note that out of a total of \$222,000 claimed by various parties in suits disposed of in the Circuit Court less than \$2,000 in verdicts were recovered, and the total of all claims, including judgments paid for the year, were the sum of \$5,553.45.

A California Idea for County Roads

Los Angeles, Cal.—The voters will be called on to say whether or not Los Angeles County shall issue bonds in the sum of \$3,500,000 for the purpose of building a system of county highways. The plan originated with the Highway Commission, which has spent many months in cooperation with the Good Roads Association, and no recommendation for the issuance of the bonds or the carrying out of the project was made until an extensive series of surveys and estimates had been made. The project embraces an aggregate of 330 miles of county highways, outside of the incorporated cities and towns, and the whole is designed to form a network connecting all of the cities by the most direct routes. According to the plans agreed upon, the finished road shall present a wide, well-formed roadway, with a central area of hard, unyielding, durable pavement, with clean, properly graded gutters on each side and guard fences where required for safety on embankments. The central area of the highway for the entire length, except across bridges, shall consist of a paving of protected macadam or protected gravel held in place on each side by a shoulder or border. The sub-grade or base of the paved portion is to be brought to grade or proper shape, and when mud, adobe or other unfit material is encountered it is to be taken out and the space filled with good sound earth or gravel. The shoulder or border constructed on each side of the paved area of the highway is to have a general width of seven feet and is to be formed of the best material available along the roadway.

The surface of the roadway will be protected by the use of a heavy asphaltic oil at the rate of approximately one

and one-fourth gallons to the square yard, and sharp sand or fine gravel. The oil and sand or gravel are to be put on in at least two applications and are to be thoroughly rolled. The thickness of the macadam will be two inches more at the center than at the sides, and the thickness of each road is to be determined by the character of the soil which supports the road and by the character and the volume of the traffic to be accommodated. On the principal highways it has been determined that the width of the macadamized portion of the roadway shall be sixteen feet, and the width of the finished road, including the macadam, shall be thirty feet. All culverts and drains are to be constructed of concrete and metal or heavy vitrified pipe with concrete portals. The side gutters are to be of stone.

Trouble Over Size and Quality of Granite Blocks

Louisville, Ky.—A conference of city officials was recently held at the Mayor's office regarding complaints of the quality of granite blocks supplied by the Georgia Granite Company. The contract for 6,000 tons of granite blocks to cost \$32,000 called for blocks 3 to 4½ inches wide, 6 to 6½ inches deep and from 5 to 9 inches long. The blocks supplied are alleged to be regular run blocks which can be supplied for \$1 or \$1.50 less per ton. About 3,000 tons have been received, part of them used on Washington street, where a large number were condemned by an inspector who was soon after discharged. Members of the Board of Public Works claim that the quality of the granite was better than required and hence the specifications regarding dimensions were not strictly enforced. The payment to the company will probably be reduced \$7,000 to \$8,000.

Horsemen and Automobilists Combine for Good Roads

Minneapolis, Minn.—Minneapolis teamsters and motorists have joined forces in an effort to secure better roads, the Minneapolis Teamsters' Union and the Minneapolis Automobile Club having decided to go into politics to secure good highways. The plan is to work and vote only for aldermanic candidates who will pledge their aid to the good roads cause. Theodore Wirth, Superintendent of the Minneapolis parks, has been elected the first honorary member of the automobile club and he is expected to help the movement.

Record-breaking Era of Improvements

Portland, Ore.—Records of the City Engineer show that the amount of work being done in street and sewer improvements far surpasses that of last year. Although more pavement was laid in 1907 than in any year hitherto, the record of last year bids fair to be nearly doubled. Less macadam and gravel and more permanent pavement are being laid this year. At the present time there are proceedings for 288 street improvements under way and 86 sewer improvements. Of the pavements, 160 are actually being laid. Another field surveying crew has been given the City Engineer to carry on the work.

Women Oil the Streets

Stouchsburg, Pa.—Fully two hundred of the eight hundred people of this town on an appointed day joined in a street sprinkling crusade. Scores of women and children turned out with garden sprinklers, and these were used to sprinkle the streets with oil. By subscription, seven barrels of oil had been bought, and all of it was sprinkled on the streets to keep down the dust that has become so troublesome since automobiles are constantly passing through the town.

SEWERAGE AND SANITATION

Baltimore's Great Sewage Pumping Plant Begun

Baltimore, Md.—In the presence of members of the Sewerage Commission and the Engineering force, Mayor J. Barry Mahool broke ground for the sewage pumping station on Eastern avenue, near President street. The building will be 188 by 157 feet and five stories high. Five pumping engines to be built by the Bethlehem Steel Company, at a cost of \$400,000, will force the discharge through cast-iron mains to the outfall sewer leading to the disposal plant at Black river. The cost of foundations will be \$119,754 and the superstructure \$179,200.

Safeguarding Public Health in Vermont

Burlington, Vt.—At the opening of the tenth annual school of instruction of Health Officers of the State, Dr. Charles S. Caverly of Rutland, President of the State Board of Health, reviewed the history of the school, showing how it had developed in connection with the State bacteriological laboratory. He said that the greatest need in furthering public health work in Vermont is the active sympathy of the public, which will not only tolerate health regulations, but insist on them. One of the most important duties of health officers is in spreading sanitary knowledge so that the public would demand preventive legislation and enforcement of the laws.

River and Harbor Purification

Erie, Pa.—The question of purifying Mill Creek, which is at present not much more than an open sewer emptying into Lake Erie, is again to the front. There are seventy-five miles of sewers that empty into the creek and the harbor. Complaint having been made to the State Board of Health, Commissioner Dixon has sent inspectors to Erie to study the conditions, particularly with regard to the currents in the bay, the object being to see what part they can be made to play in carrying off the sewage. With regard to the creek the present plan is to construct two intercepting sewers in the bed of the creek, one on each side. These will receive the sewage now emptying into the creek, and in addition that from main sewers now discharging in the bay. The point to be considered next is whether these intercepting sewers can be carried into the lake where the currents are sufficient to take care of the sewage, or whether a disposal plant must be built. It is not proposed to do the work all at once, but a fund of \$20,000 a year is to be set aside for the purpose.

Better Protection of Water Sheds and Reservoirs

Mobile, Ala.—The Board of Health, acting on a report by State Bacteriologist Dr. E. M. Mason which showed a rather high percentage of colon bacillus in the city's water, recommended that the capacity of the reservoir be at least doubled, in order to give the water a longer average time for sedimentation; that the surroundings of the pumping station be put in better condition; that the waters of a small creek be diverted from the city's supply; that the intakes and adjacent areas and the reservoir be fenced in to keep away animals; that the watersheds and reservoirs be thoroughly and efficiently policed; and that the city take steps to acquire control of the whole of the watersheds supplying the city and Bienville pumping stations.

Paterson's Position Regarding Trunk Sewer

Paterson, N. J.—At a meeting of local board representatives, officials and taxpayers, a resolution was adopted setting forth the city's position in the trunk sewer matter. The resolution is to the effect that the city of Paterson offers to pay its share of the cost of the proposed trunk sewer with the modification that the sewer discharge into a purification plant at the meadows below Newark capable of sufficiently purifying the outflow of the trunk sewer sufficiently to permit its discharge into Newark bay. In the event of the examination showing that it is feasible at a not materially greater expense to carry out the plan, the city of Paterson declares itself ready to go into the plan.

WATER SUPPLY

Replacing Small Mains

Atlanta, Ga.—Following the completion of the new 36-inch main from the river to the reservoir which now makes it possible to deliver 40,000,000 gallons of water a day, the first steps have been taken towards a general replacement of small water mains in the business centre of the city. Old 6-inch mains are being replaced with 16 and 20-inch pipe.

Plug Blown Out of Water Main

Butler, Pa.—Butler came near having a water famine on the 4th of July, and it has principally a thirsty and vigilant citizen to thank that the misfortune did not occur. The citizen in question wanted a drink during the night and went to a faucet to get it, but no water came. He called up Superintendent Wright of the company, who on investigation found the reservoir nearly dry. Calling on his assistants, search was made of the mains and the leak located. It was found that a plug had blown out of a 12-inch main. A new plug was put in at once and Butler had water for the Fourth.

Water Company and Borough Disagree

Charleroi, Pa.—A fight has begun between the borough and the Charleroi Water Company. The company has started suit against the city for unpaid hydrant rentals. The object of the borough is to take the franchise from the company or arrange for a new one giving the city better service. The borough has withheld payment of the bill on the ground that hydrant pressure has been insufficient, that the company has failed to put in additional pumps as promised, and that the quality of the water, although it passes through a filter, is bad.

Filthy Water Mains in Louisville

Louisville, Ky.—Officials and citizens of Louisville are being surprised and shocked at the condition of their water pipes which are now being cleaned with scrapers. The appearance of the water is like that of a catch basin, the smell is disgusting, and the quantity of mud and rust removed has amounted to as much as four wagon loads to the block. In one instance, the deposits were piled up three feet high in front of a hydrant. In some cases there was scarcely enough space left in the mains for water to run through. Guesses as to the number of germs dislodged have reached amazing figures. It is the first time the pipes have ever been cleaned.

To Carry Water by Tunnel

San Rafael, Cal.—The Lagunitas Water Company has a plan of constructing a dam 110 feet high on the northwestern slope of Mt. Tamalpais and forming a reservoir which will impound 2,000,000,000 gallons of water to furnish a flow of 10,000,000 gallons a day to San Rafael and other towns. The Marin County Water Company, a rival, had bought up surrounding territory thinking it could make it unprofitable for the Lagunitas company to pipe a supply over the mountain. The latter company now proposes to construct a tunnel 8,000 feet long to bring water to prospective customers.

Trenton Takes Steps to Secure Pure Water

Trenton, N. J.—Acting upon a report of Consulting Engineer Charles A. Hagone, the Board of Water Commissioners have recommended the purification of the Delaware river water by means of a sedimentation basin. The location of the proposed basin on a lot of 25 acres is at Riverside Heights, near the westerly limits of the city. A new pumping station will have to be built to force the water into the new basin. From this it will flow to the present Calhoun street station and then be pumped into the reservoir now used for the city distribution. Going further, the report says that the securing of a large water supply in the near future will be an absolute necessity, that the quality of water now being used in this city has recently been subjected to much adverse criticism, and proves detrimental to the interests of the city, and the purification of the water cannot long be delayed with safety to the health and material welfare of the citizens.

STREET LIGHTING AND ELECTRIC POWER

Electrician Saves Money

Cambridge, Mass.—City Electrician Timothy C. O'Hearn has secured from the Cambridge Electric Light Company a reduction of \$5 a year for each incandescent light in the city. The reduction went into effect on July 1, and it will mean a saving of \$1,750 during the present financial year, and about \$2,500 in a full year. By effecting this saving, Mr. O'Hearn will be able to install a number of new lights during the present year, without asking the City Council for an addition to his appropriation. It will also give him a little money which can be used for some apparatus which is very badly needed in the Electrical Department.

Street Names on Arc Lights

Fort Worth, Tex.—Street Commissioner Sam Davidson has conferred with real estate men and other citizens regarding the change in names of certain streets. It is desired to have the matter settled before the new arc lights are installed, which will bear the names. From a recent report compiled by the City Engineer it appears that there are forty-seven streets bearing more than one name and thirty-four with duplicate names.

Conference Over Overhead Wires

Harrisburg, Pa.—At a meeting of the Underground Wires Commission of Councils the general question of the overhead and underground wires was gone over. Commissioner Mahy suggested friendly conferences with the companies maintaining wires, saying that the city had no power from the Legislature to compel the placing of wires underground. City Solicitor Seitz was quoted as of the opinion that if overhead wires are a menace, the city can compel the companies owning them to place them underground. Fire Chief Garverich said that the Fire Department did not ask to have the wires placed underground at once, but it does ask that competent men be detailed to attend all fires and care for the wires so that firemen may be protected.

Inspection of Electric Wires and Apparatus

Newark, N. J.—An ordinance has been passed providing for the supervision and inspection of all electrical wiring, appliances and apparatus. Hereafter a permit must be secured from the Superintendent of Buildings by any person desiring to install wires or electrical apparatus. The work will be inspected before it can be used, the inspector having authority to remove flooring, plaster, etc., in order to make proper examinations. All wiring and apparatus now in use will be inspected, and if defects are found the current will be disconnected until they are remedied. Certificates of inspection will be issued. Meters will be inspected at a cost of one dollar to the consumer, but if they are found to register inaccurately to the extent of four per cent. against the consumer, the fee will be returned. An Electrician, at a salary of \$1,800, to act under the supervision of the Superintendent of Buildings, will be appointed. Assistants and suitable testing apparatus will be provided. The wiring and apparatus in places of amusement shall be inspected daily or weekly. Persons violating the ordinance will be fined \$50.

Cedar River Water and Power Resources Inspected

Seattle, Wash.—Mayor John F. Miller, City Engineer R. H. Thomson, Superintendent of Public Utilities A. V. Bouillon and L. B. Youngs, Superintendent of Water and Lighting, recently made a three-day's trip through the Cedar river watershed, including Cedar lake, high up among the hills. City Engineer Thomson has worked out a plan for increasing the size of the lake from one by three miles to two by four miles and the general depth of the water by 60 feet. At an expenditure of \$200,000 a dam a mile and a quarter below the present one can be built that will impound a year's supply of water for power and drinking purposes.

FIRE AND POLICE

Boston Needs More Fireboats

Boston, Mass.—A recent dock fire at the Cunard pier in East Boston, which caused a loss of \$1,500,000, demonstrated the need of more fireboats. Boston's entire waterfront is now protected by two fireboats, one of which, engine 31, is antiquated. At the time of the fire the other boat, engine 44, was in drydock receiving a coat of paint, and could not be used. No. 31, which went to the fire, had to be towed or hauled by hand at times. Chief Mullen wants two new powerful boats so that two may be in commission and a third in reserve.

Report on New York Fire Department

New York, N. Y.—The Commissioners of Accounts have submitted their report to the Mayor regarding the quality of fire hose which proved so defective at the fire in the Parker building last January, and regarding other conditions alleged to exist in the Department. Regarding the hose supplied by one company, the Windsor, the Commissioners make it very plain that the city was swindled. The relations of the Manhattan Fire Alarm Company, which enjoys a monopoly of the privilege of connecting its boxes in buildings with the Department's telegraph wires, are condemned. It is recommended that the property of this company be acquired by the city and made a part of the regular fire alarm system, which needs extensive reconstruction. Regarding the discipline prevailing in the uniformed force, the investigations proved inconclusive, owing to reticence of the men to give any information reflecting on their superiors. The suspicion is aroused, however, that at times some men are favored and others are pounded for reasons that do not appear. Among the minor recommendations made are the establishment of a better and larger training school, with a longer term of probation; decrease in the leaves of absence; cutting out of details doing clerical work; refusal to supply firemen for duty at theaters at the expense of the city; the establishment of a permanent trial board.

Throws Stream Seventeen Stories Under Pressure System

New York, N. Y.—At a Sunday morning fire drill given for the purpose of affording the firemen practice in handling hose under the great pressure of the new service, a stream was thrown from a water tower above the top of a seventeen-story building. One hundred firemen with 2,000 feet of the new high-pressure hose reported for duty. Forty-eight lines were coupled to twelve hydrants. Two men were stationed at each nozzle, double tripods being used for two-inch streams and the prong and holder for inch and a half streams. Some of the hose lines became unmanageable under the highest pressures and three lines of hose were burst. Chief Croker is satisfied that lower New York is now well protected, that the chance of a large fire in that district is small and that steam fire engines are a thing of the past.

Rome, Ga., Adopts Paid Department

Rome, Ga.—The first of July the ordinance adopted by Council providing for a paid Fire Department went into effect. For some time negotiations have been going on between a committee of Council and the volunteer department looking towards an amicable settlement of the claims of the volunteers as a basis for a fair payment by the city for all property.

High Pressure Service Needed in Washington

Washington, D. C.—A series of three large fires in a single night, which held the entire fighting strength of the Fire Department in action for several hours and during that time left almost the entire residential section of the city without protection, has served to call attention again to the need of a high pressure system of water mains which Chief Belt has been advocating for ten years. With such a system six hydrants alone would more than double in effectiveness the entire District Fire Department of nineteen fire engines. A gravity system with mains from Fort Reno is contemplated.

GOVERNMENT AND FINANCE

Revision of City Code Completed

Augusta, Ga.—The rearrangement and bringing up to date of the city code by Attorney C. E. Dunbar has been announced completed. The work will be looked over by City Attorney Cohen and Clerk of Council Martin, ratified by Council and then printed.

Plan for a Federated Boston

Boston, Mass.—In response to an invitation of the Finance Commission for suggestions regarding a new form of government for the city of Boston, Professor Joseph H. Beale, of the Harvard Law School, a member of the Cambridge Board of Aldermen, appeared before the Commission and presented a carefully worked out plan for a Federated Boston. The suggestion is that all the cities, half of whose areas lie within a radius of ten miles of the State House, join in a general government consisting of a Mayor and four Commissioners, all to be paid, holding long terms of office and devoting their whole time to the city's business. The functions of the Federated city would include: police, fire protection, health, interurban bridges, collection of water, disposal of sewage, parks, baths, celebration, high schools, libraries. The present city of Boston is, according to the plan, to be dissolved into substantially its original divisions, to be called cities, the individual cities would have charge of: Elections, assessment and collection of taxes, licenses, poor relief, hospitals, engineering, highways, distribution of water, collection of sewage, primary and grammar schools. Jurisdiction over the central business section of the present city would be retained by the federated government. As a means of bringing the general government into close contact with the people, a large assembly consisting of one member for each 500 of population would be formed to hold meetings every three months to pass estimates and look into the acts of the Commission.

Alleged Secret Organization Against Police

Chester, Pa.—No call has been issued and no date fixed for the investigation proposed in the resolution offered by Mr. Crowe and adopted by Select Council regarding alleged charges by secret organizations against the Police Department, growing out of the trolley strike. There is a doubt in the minds of many whether such an investigation would be legal under the circumstances, as one branch of City Councils turned down by vote the proposition, while the other branch decided by one vote to proceed with the inquiry. The question that arises is whether one branch can conduct such an investigation without the indorsement and cooperation of the other.

Sinking Fund Board Abolished

Columbus, Ind.—Acting on the advice of City Attorney C. B. Cooper and also on a private opinion from Attorney-General James Bingham, the City Council, sitting as a board of finance, has abolished the Board of Sinking Fund Commissioners. The new public depository law, passed in 1907, provides for the receiving of bids from banks and designating the sinking fund depository by Council, which was the principal duty of the Commissioners.

Increase of Wages Stopped by Mayor

Lynn, Mass.—Mayor Thomas F. Porter has written a letter to City Treasurer H. S. French notifying him not to pay increases in the wages of ten employees of the Water Board. A short time ago the Board made the increases which range from \$1 to \$4.80 a week and the Mayor refused to approve them. In spite of this the Board made the increases in its payroll, hence the letter. The Mayor says the city is short of money and, moreover, he does not believe the Board is justified in forcing up the pay of its employees and thus widen the breach between those citizens who are fairly well paid and those who are unable to secure employment even at a low wage.

Must Reassess City or Block Improvements

St. Paul, Minn.—Mayor Daniel W. Lawler has sent a message to Council urging the necessity for a reassessment of all real estate in the city by a special commission in order to increase valuations so that the provision in the charter limiting expenditures for improvements to twenty-five per cent. of the value of property benefited shall not act so as to block projects imperatively needed. Assessments exceeding the limit of twenty-five per cent. have to be paid out of the general fund. These charges have become so large that the fund cannot stand it any longer and the alternatives are to stop improvements in the outlying districts where they are most needed or to reassess the real estate.

Story of San Francisco's Assessment Roll.

San Francisco, Cal.—Assessor Dodge has completed the work of preparing the assessment roll for 1908-9. He makes the following interesting comparisons between the figures for the present year and the year immediately preceding the fire:

	1905.	1908.
Real estate	\$304,136,185	\$258,642,215
Buildings	97,830,165	90,996,500
Personal property	122,264,596	103,912,469
Total	\$524,230,946	\$453,551,184

During the past year there has been a gain of \$24,181,299 in the assessment of buildings. Reductions have been made in the valuation of real estate in the burned district, but these have been offset by the gain in value in outlying sections of the city.

Bookkeeping and Financial System to Be Reorganized.

Toledo, O.—A complete reorganization of the city's accounting and auditing system, by which the Auditor will keep the accounts and the Treasurer be made the recipient of all moneys collected for any city department, is likely to be the result of an examination of the books of the Water Department by examiners appointed by the city, and later by the State Auditor's men. The books of the Water Department are found to be in an inextricable jumble and erasures found in the books seem to indicate that somebody got money that belonged to the city.

Commissioners Exonerate Engineering Department

Washington, D. C.—Completely exonerating the Engineer Department of the District of Columbia of the charges of "favoritism," as alleged in the original complaint made by P. J. Brennan of the Brennan Construction Company, and at the same time admitting that the evidence showed a "case of sporadic dishonesty" in the acceptance of gifts and loans by Charles Fernald, former Assistant Engineer of Highways, the Commissioners recently concluded their exhaustive investigation of the business methods of the Engineer Department by announcement of their findings in the premises. The verdict was signed by Commissioners Macfarland and West, the engineer Commissioner, Maj. Morrow, having declined to vote.

How Not To Manage Town Finances

West New York, N. J.—Judging from the report made by Herbert Boggs, of Newark, to the West New York Civic Association, the town is in a bad way financially. The town's indebtedness is \$1,093,144, a per capita debt of \$151.91. This amount includes about \$530,000 of assessments for improvements, most of which has never even been assessed. Public work has been paid for by improvement certificates and when they accumulated, funding bonds were issued to care for them. No provision has been made to redeem the bonds. The town maintained a Sinking Fund Commission but the fund never received a cent. The town is in arrears to the State and county for school taxes. Of late it has been impossible to borrow money and contractors have refused to proceed with their work.

REFUSE COLLECTION AND DISPOSAL

Buffalo Has Trouble in Determining Low Bidder

Buffalo, N. Y.—Bids received from four contractors differed so much in the matter of prices for work done under various conditions that each bidder claimed that his figures were the lowest. So much delay was occasioned in endeavoring to decide the matter that the interests of the public were threatened and Mayor J. N. Adam intervened, urging that the public demanded immediate action. Accordingly, the committee having the matter in charge awarded the contract to the Buffalo Fertilizer Company for a term of five years at its bid of \$206,000, with a deduction of five per cent. to be made when the city's garbage destructor was in running order.

Good Work in Garbage Collection

Columbia, S. C.—The new Superintendent of Streets, T. Keith Legare, has improved and systematized the work of garbage collection. He is having collections on streets running north and south on three days of the week and on streets running east and west on the other three. The city has been divided into seven districts and each scavenger will be required to keep his route clean. The Superintendent has requested citizens to familiarize themselves with the garbage ordinance, as there is room for improvement on their side.

City Takes Scavenger System

Dallas, Tex.—The city of Dallas has taken charge of the scavenger service. Up to this time the work has been done privately. The scavenger was elected by the city, received fees for the work done, owned the apparatus necessary and maintained it. He had an office at the City Hall, but otherwise his business was independent. The city decided to make no change in the methods or in the rates charged until it ceases to be a matter of experiment to have the affairs in the city's management. Frank Coe, the scavenger, is to remain in charge of the work. He is to work at a monthly salary of \$485. Out of this he is to furnish to the city the seven wagons and the sixteen horses and mules to be used as teams, to give personal direction to the system, and to maintain the outfit in good condition. The city is to attend to all inspection of premises and to all collection of money due for services rendered. At the end of the year, if the city is pleased with the arrangement, the outfit will be bought outright.

Garbage Disposal Plans

Troy, N. Y.—An ordinance has been presented and favorably reported making it necessary for an individual or a company to secure the permission of the Common Council before establishing a garbage disposal plant of any kind within the city limits. Provision is made that an application must be in writing, with an explanation of the proposed manner of garbage disposal, and that the Common Council shall fix a time and place for a public hearing on the application, advertising such hearing once a week for at least three weeks. If the Common Council decides that a plant for garbage disposal in any locality would be a nuisance, the Aldermen have the power to deny the application, according to the clauses of the ordinance. Violation of the ordinance is punishable with a fine.

Garbage Ordinance Fixes Charges

Virginia, Minn.—The question of handling garbage, which has been a widely discussed theme, has finally come to a head. Council has provided by ordinance for the collection of garbage by the City Scavenger from garbage barrels and pans that all dwelling houses and hotels doing cooking must provide, whenever the city health authorities order such removal made. The charge for cleaning these garbage receptacles will be on the basis of 25 cents a barrel. If the scavenger is not promptly paid the charges will be assessed against the non-paying property owner.

PARKS AND OUTSIDE ART

City to Operate a Tree Nursery

Atlanta, Ga.—Alderman E. E. Pomeroy has introduced a resolution calling upon the Park Board to investigate and make a report upon the cost of the city operating and maintaining a shade tree nursery. Alderman Pomeroy believes that the city can devote a portion of its stockade farm or some other vacant land owned by it to the raising of shade trees, the trees to be transplanted along the streets of the city. He has investigated the nurseries operated by other cities for the purposes mentioned and he is of the opinion that one could be conducted here to great advantage. It is pointed out that arrangements could be made whereby citizens desiring to themselves set out the shade trees could be furnished them free from the city nursery. The Alderman is convinced that the results would be immediate and wonderful and that Atlanta would soon be noted for its multitude of beautiful and shady streets.

Mayor Ward Promotes Block Societies

Birmingham, Ala.—Birmingham as a whole is already a beautiful city with its landscape effects and handsome homes. In order to make it a model in every respect and every section, Mayor George B. Ward is encouraging the formation of "block societies," made up of the dwellers on a single block. In this way a concerted movement will be started to have householders keep their premises in good order, their lawns green, their shrubbery trimmed, and their back yards clean.

Private Launches in Parks

St. Paul, Minn.—The status of gasoline launches on lakes controlled by the Park Board came up for consideration at a recent meeting. The matter arose in connection with a request for permission to operate a private gasoline launch on Lake Phalen. The Board did not take definite action on the matter, but referred it to the Corporation Attorney to determine what liability the Park Board would have in case of accident. It was suggested that the Board might be held financially responsible in case the launch ran down another craft. A similar case arose on Lake Harriet when the launch operated for public use by the Minneapolis Board collided with a rowboat. The Board was compelled to pay damages in the sum of \$5,000.

RAPID TRANSIT

Praises Berlin Traction

Berlin, Germany—Edward Bassett, a member of the New York Public Service Commission, has arrived to study the transportation conditions. He has inspected the street railway system, and finds it superior in some respects to that of New York, especially in the case of stopping and starting the cars, and their comparative noiselessness, the ballast being laid to take up much of the sound. He notices that economy is better practiced in Berlin, citing as an instance the continuous waste of oil on the bearings of the cars of the New York system. He has seen the hanging street railway at Elberfeld, and intends to visit the experimental section now operating in a suburb of Berlin, but he reserves his opinion as to whether such line will be recommended for New York.

Automatic Change Boards in Tunnel

Hoboken, N. J.—Tests are being made in the Hoboken terminal of the Hudson and Manhattan Railroad Company, of a new device which is expected to facilitate the selling of tickets and the return of change to passengers. This consists of a board which extends about ten inches from the window, having four concave sections so that four passengers can be served at once. In making change the coins are allowed to slip down into a bowl-shaped compartment, and with the ticket are picked up by the buyer. It is of special advantage to passengers carrying bundles.

Railway and Water Company Dispute Over Electrolysis

Jamestown, N. Y.—Trouble which has been accumulating for some time between the Jamestown Water Commission and the Jamestown Street Railway Company is coming to a head. The trouble arises over the escape of electricity from the street car wires into the water mains, causing electrolysis. It is conceded on both sides that the water mains are being ruined, but the trouble arises over the matter of responsibility. The Water Commissioners claim that the trolley wires should be protected so as to prevent the escape of electricity, and the street railway company claims that the Water Commissioners should protect their pipes to avoid contamination.

Side Doors Ordered in Subway Cars

New York, N. Y.—In accordance with the recommendation of its consulting engineer, B. J. Arnold, and contrary to the wishes of Frank Hedley, general manager, the Public Service Commission has issued an order to the Interborough Company to equip its subway cars with side doors. At first 16 cars will be equipped to be put in service October 15 and operated in two trains during rush hours. The cars will be fitted with automatic door closing signals. Further orders will be given after the operation of these trains has been observed. Eight hundred cars are now used in the subway and it would take years to change them all.

Disputes Subway Claims

New York, N. Y.—The Public Service Commission has made a flank movement on the Rapid Transit Subway Construction Company, which built the subway and which is claiming \$6,000,000 from the city for extras. The Commission has filed with the arbitrators in the dispute counter claims for more than \$2,000,000 for work which the company did not carry out according to specifications. The claim made by the contracting company is based upon the contention that any work not specifically called for in the plans and specifications or any variations in the plans and specifications should be paid for by the city as extras.

London and New York Subways Compared

New York, N. Y.—Public Service Commissioner McCarroll and Henry B. Seaman, Chief Engineer, have returned from an inspection of the transportation systems of London, Paris and Berlin. The Commissioner says that the traffic problem of London is so different from that of New York that comparison is hardly possible. The congestion is much less during rush hours because passengers are carried in every direction. He was favorably impressed with the method of discharging passengers. This is accomplished by elevators holding from 50 to 100 persons each, which the passengers enter on one side and leave by the other. London subways having two tracks are without express service. Passengers are discharged quickly from doors at the ends and in the center. Fares are about one cent a mile. Surface roads owned by the County Council charge fares of from half a penny up according to distance.

Exhibits New Scenic Road

Rochester, Pa.—The general officers of the Ohio Valley Scenic Railway, the new trolley system in the Ohio Valley from Rochester, Pa., to Steubenville, O., where it makes connection with lines in Wheeling, W. Va., entertained a party of Pittsburg newspaper men recently by an inspection of the property. The road passes through a beautiful and historic section, tapping one of the most prosperous manufacturing and agricultural sections of the two States. The construction is of the best, and the schedule is such as to allow for time equal to steam roads. Much of the line is built on private right of way, and in the 88 miles of main track there is but one grade crossing. The equipment is of the best, each of the coaches costing \$10,000. This line, it is believed, will enter Pittsburg over the track of the Pittsburg Railways Company when a short connection near Sewickley is built.

MISCELLANEOUS**A Gambling Case**

Cincinnati, O.—Mayor Markbreit recently expressed a determination to do his utmost to suppress what is called handbook betting on horse races. Accordingly he issued instructions to Chief of Police Milliken to arrest and prosecute any whom he found engaged in this method of violating the laws of the State against gambling. The suspicions of the police having been aroused concerning a certain individual, an attempt was made to secure evidence against him sufficient to convict by procuring persons to place a bet with him. An officer and a detective, in citizen's clothes, entered his place and were not only successful in inducing him to accept their money on a designated horse in a particular race, but after witnessing the race in which their horse was successful returned and collected their winnings. The handbook man was thereupon arrested and when arraigned in the Police Court demanded a jury trial. After considerable difficulty a jury supposed to be unprejudiced was secured. The cost of impaneling the jury, we have been advised by an official who is in a position to know, cost the public about \$200. At the trial the two men who placed the bet, saw the race and collected their winnings, testified to these facts, and yet notwithstanding that no evidence whatever was introduced by the accused, the jury in less than five minutes returned a verdict of not guilty.

Cleveland Puts Ban on Fourth's Fireworks

Cleveland, O.—By a vote of 21 to 7 the City Council has passed an ordinance decreeing that henceforth no private celebration of the Fourth of July by the use of firearms or fireworks shall occur. The Council, however, reserved the right to permit the city to give an "official display" in the public parks, if it so desires. The ordinance was the result of the deaths of ten persons in this year's Independence Day observance.

Would Establish City Hospital

Louisville, Ky.—Mayor James F. Grinstead has sent a message to Council urging the need of a city hospital and suggesting that an election be held to decide on issuing \$1,000,000 bonds for the purpose.

First Passenger Crosses Manhattan Bridge

New York, N. Y.—The first man to cross the new Manhattan bridge, the fourth structure to span the East river, recently made the trip but not in a manner that many travelers would care to follow, as the footpaths were not completed. The work has been progressing rapidly. The next portion of the work will be the spanning of the cables, which will be 20 $\frac{1}{4}$ inches in diameter and 2,820 feet long from anchorage to anchorage.

Mayor Charges Seven with Libel

Philadelphia, Pa.—Mayor Reyburn has put into execution his oft-repeated threat that he would halt the attacks and criticisms of himself and his administration of the affairs of the city by obtaining warrants for the arrest of four editors and three cartoonists of the *North American*. The affidavit is based on editorials and cartoons published in that newspaper during a period of more than a year that the Mayor has been in office, and charges wilful, malicious and defamatory libel.

Washington Wants Sane Fourth of July

Washington, D. C.—"A sane Fourth of July" is being much discussed by the Commissioners, officials of the Fire and Police Departments and citizens generally. Commissioner Macfarland suggests, in future, that the sale of fireworks in the District be forbidden, and that a grand display of fireworks be given under the direction of the Chamber of Commerce and the Board of Trade, the money to be raised by popular subscription.

LEGAL NEWS

A Summary and Notes of Recent Decisions—Rulings of Municipal Interest

ACQUISITION OF WATER SUPPLY—PROCEDURE

Griffin vs. City of Tacoma et al.—Pierce's Code provides that, when a plan for furnishing water to a city shall afterwards be deemed insufficient, the City Council may determine the fact by resolution, and may thereupon by ordinance submit to the electors any new plan or extension. A city purchased the different sources of water supply owned by a private company, one of which was not being used as a part of its water system. Held, that the city, in afterwards connecting that source with the city mains, did not change the plan of the system, and no vote was required to authorize the connection. Revised Charter and Ordinances of Tacoma, section 96, pages 79, 80, provides that moneys collected by taxation for special funds provided by law shall remain therein, and that all funds raised by a vote of the people or by special taxation for a special purpose, shall be used for that purpose and none other, and that no fund shall be "diverted" from the purpose for which it was originally assessed or collected or voted by the people, without submission of the question to a vote of the people, etc. Held, that the word "diverted" contemplates the permanently turning of a fund from its purpose, the equivalent of appropriation for some other use, and not the temporary transfer of the general fund to another fund with an assured income under the control of the city when necessary to expedite the city's business. A city charter provision that contracts entered into by the city shall be countersigned by the Comptroller is merely directory, and, where the law does not clearly making the countersigning necessary, the failure of the Comptroller to perform that purely ministerial duty does not affect the validity of a contract authoritatively executed in behalf of the city by the Commissioner of Public Works.—Supreme Court of Washington.

PEDDLERS' LICENSE

Butler vs. City of Moberly.—That some unidentified person filed a complaint against plaintiff in defendant city's police court charging him with peddling without a license; that the city, through its officers, caused plaintiff to be prosecuted; and that, upon his acquittal and the city's appeal from police court, the city's officers deterred him from continuing in business by threatening to cause similar complaints to be filed against him, to his damage in a specified sum—does not show a cause of action against the city, since the city is not liable for any wrongful threats of repeated prosecutions made by its officers, and since, if plaintiff was guilty, he cannot complain of the threats. A city is not liable for damages sustained through its officers' wrongful refusal to issue a peddler's license.—Kansas City Court of Appeals.

INVALID STREET IMPROVEMENT CONTRACT

Coulter et al. vs. Phoenix Brick and Construction Co. et al.—Tax bills issued for a street improvement are invalid where the preliminary resolution adopted by the City Council did not describe the proposed work nor the materials to be used. The decisions of the Court of Appeals having been consistent on a given question, that court will not reconsider it, since adherence to established precedents is a cardinal principle in jurisprudence. A contractor's failure to construct a street improvement according to contract renders void tax bills issued against abutting property on account of the improvement.—Kansas City Court of Appeals.

STREET IMPROVEMENT—DAMAGES—INTEREST

Burrage et al. vs. City of Boston.—Under contracts whereby in consideration of the immediate laying out and construction of streets under Laws 1891, and amendatory acts, and of any assessments laid upon abutting land for the cost of the improvement being delayed until the damages to the owners through the taking of the land and the cost of the construction should be determined, and of the damages being offset against the proportionate part of the cost assessed to them, the owners agreed that payment of the damages should be delayed until the balance due from them after making the set-off should be determined, owners whose damages exceeded the assessments against them were not entitled to interest prior to the time when the balance due after making a set-off of the amounts assessed upon the land by the city for betterments had been determined.—Supreme Judicial Court of Massachusetts.

TITLE OF RELIGIOUS SOCIETIES IN PORTO RICO

Municipality of Ponce, Appt., vs. Roman Catholic Apostolic Church in Porto Rico.—The power of the Legislative Assembly of Porto Rico to confer, by the act of March 10, 1904, original jurisdiction upon the Supreme Court of Porto Rico for the trial and adjudication of questions between the Roman Catholic Church and the people or any municipality affecting property rights, was embraced in the express authority conferred by the Foraker act of April 12, 1900, to legislate regarding the jurisdiction and procedure of the Porto Rican courts. General prohibitions in the act of July 30, 1886, against the enactment by territorial legislatures of local or special laws in certain enumerated cases, have no application where specific permission to the contrary is granted by the organic act applying to a particular territory. The history of Porto Rico and its legal and political institutions, up to the time of its annexation to the United States, are matters which must be recognized by the Federal Supreme Court. The Federal Supreme Court will take judicial notice of the Spanish law, as far as it affects the insular possessions of the United States. The Roman Catholic Church in Porto Rico must be regarded as a legal personality, with capacity to sue and to take and hold property, in view of the law and history of the Roman Empire, of Spain, and Porto Rico down to the time of the cession to the United States, and of the recognition accorded to it as an ecclesiastical body by the treaty of Paris of December 10, 1898, Article 8, and by the law of nations. The various laws of Porto Rico relating to the formation and regulation of business corporations have no application to the Roman Catholic Church of Porto Rico. The title of the Roman Catholic Church in Porto Rico to temples erected and dedicated to religious uses is not affected by the fact that some of the funds for building or repairing the churches were public funds, appropriated for that purpose by the municipality of Ponce, where such appropriations were made without reservation or restriction.—United States Supreme Court.

PUBLIC IMPROVEMENTS—DUE PROCESS OF LAW

Wolfe Londoner and Dennis Sheedy, Plaintiffs in Error, vs. City and County of Denver as Successor to the City of Denver, et al.—A charter provision making conclusive the finding of a City Council that a proper petition for a public improvement has been filed does not deny the due process of law guaranteed by U. S. Constitution, Fourteenth Amendment, although such finding is made without notice. Whether or not a City Council has determined that the Board of Public Works has complied with the conditions of its jurisdiction to order a street improvement is not a Federal question, which can be reviewed by the Federal Supreme Court on writ of error to a State court. No valid objection founded upon the Fourteenth Amendment to the Federal Constitution can be urged against the action of a State court in so construing a State law as to bring it into harmony with the Federal and State Constitutions on the theory that the court so far neglected the obvious meaning of the statute as to make its judgment an exercise of legislative power. Something more than an opportunity to submit in writing to the City Council, sitting as a board of equalization, all objections to and complaints of an assessment for a public improvement, is essential to satisfy the due process of law guaranteed by U. S. Constitution, Fourteenth Amendment, where the law denies the landowners the right to object in the courts to the assessment, upon the ground that the objections are cognizable only by the board of equalization.—United States Supreme Court.

CONDEMNATION—VESTED RIGHTS

Simpson vs. Berkowitz.—No rights are vested in property owners by the mere adoption of a resolution by the Board of Estimate and Apportionment, pursuant to New York City Charter, which provides that such board may direct by resolution that upon a day specified the title to property taken for public use shall vest in the city, and such board, therefore, may subsequently pass another resolution postponing the vesting of title to a future day, although such action may work an unwarranted hardship upon the property owners.—New York Supreme Court, Appellate Term.

CHANGE OF GRADE—PROPERTY DAMAGED

Burde vs. City of St. Joseph.—Where plaintiff owned two lots on a corner of two streets, both lots being divided by the recorded plats into independent subdivisions, and both were separately acquired and improved, plaintiff was not entitled to an award of damages to the inside lot for an alleged change of grade of the street on which it did not abut.—Kansas City Court of Appeals, Missouri.

MUNICIPAL APPLIANCES

Lutz Surface Heater

THE Equitable Asphalt Maintenance Company, Kansas City, Mo., have been giving a trial of the operation of the Lutz surface heater by resurfacing several blocks of asphalt pavement on Bedford avenue, Brooklyn, N. Y. The work, outside of the services of the engineer in charge of the heater, has been done by one of the repair gangs employed directly by the Borough and the new material used was prepared at the municipal asphalt plant. Bedford avenue is the main thoroughfare leading from Brooklyn to Coney Island and is traveled by many automobiles, carriages and delivery wagons carrying supplies to the shore resorts. The surface being renewed was laid nineteen years before. The street, which is about 40 feet wide, was renewed in four longitudinal strips and traffic had not been interrupted, showing that it is possible to operate the Lutz machine without much danger of frightening horses, although a contractor for his own convenience would no doubt have preferred to shut off the block on which he was working. The finished work looks as good as a new street and there is no reason for supposing that it is not as substantial. There is absolutely no burned or overheated material in the work and the new surface is thoroughly welded to the old at the bottom and sides. Besides there is a distinct advantage in having a portion of the old surface and binder in place, for with the addition of the new material the whole bituminous roadway is thicker than originally, hence there is a greater amount of oil and light bitumen in a reservoir as it were to replace the small amounts of volatile matter that may evaporate from the new surface as time goes on, thus giving the new material added life.

The machine that does this work is not to be confused with the "burners," whose direct flames burn or carbonize the surface of the pavement or otherwise injure it. Direct flame does not reach the pavement in the operation

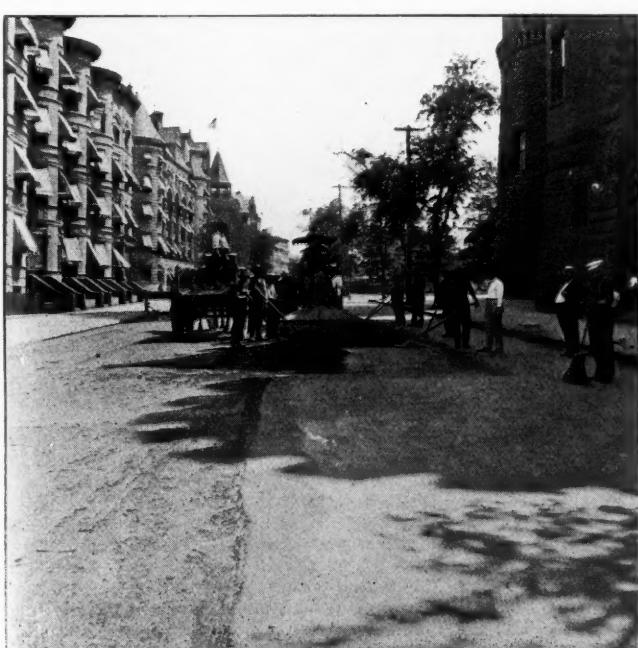
of the Lutz machine, only heated air and gases formed by the combustion of oil under the boiler. The bulky parts of the Lutz heater are the boiler, frame and running gear of a traction engine, selected, of course, for its lightness and adaptability in other respects to the work in hand. Heat, as stated, is supplied for convenience of perfect control by an oil burner using "gas oil" or almost any kind of oil that can be cheaply obtained. From the tubes of the boiler the heated air and gases pass through a horizontal flue forward to a vertical elbow, where they are drawn down by a steam jet from a special circular perforated brass nozzle into the large and substantial hood, which is let down by a steam-operated lift onto the surface of the pavement to be repaired. A number of the details of this machine are interesting, as they have been carefully selected. The capacity of the boiler is rated at 16 horsepower, sufficient for the purposes for which it is used, namely, to propel the machine both when at work after a section of pavement has been heated, to move it at a reasonable rate of speed from one job to another, to supply steam continuously for the blower, to operate the pumps and to raise and lower the hood.

Motive power for the machine is furnished by a rotary engine occupying little space about the center of the horizontal boiler near the top. The wheels carrying the machine are light, wide and smooth, so as not to sink into pavements in warm weather. A tank for fuel oil is carried above the boiler in front, where the oil is kept warm and a water tank is in the rear back of the fire box. The hood is raised by a piston, steam being turned into a cylinder, when the direct connected hood lifts as the piston rises.

The brass nozzle which draws the hot air through the fire box and flues and forces it down under the hood was the product of considerable study, the object being to do the work with as little consumption of steam as possible. A single jet was found to consume too much steam and not do the work properly. Consequently a brass nozzle with small holes arranged in a ring was used. This makes the heat uniform on all sides and takes little steam. The work is in charge of Mr. John C. Sheridan, Chief Engineer of the Bureau of Highways, and Mr. C. K. Lennon, Superintendent of municipal asphalt plant.

Steam Gauges

THE Standard Gauge Mfg. Company, Syracuse, N. Y., manufactures gauges for all purposes. Pressure and vacuum gauges are made in two models: A, with independent movement for high-class service where accuracy, durability and finish are important, and B, for ordinary commercial purposes. In Model A the movement is absolutely independent of the case, being separated from it by a liberal air space. It cannot be strained or distorted by twisting the case or affected by unequal thermal expansion. The company makes handsome marble or marbleized gauge boards. One adopted for a water works office has a clock, compound vacuum gauge, steam gauge and water pressure gauge all on a single board.



SURFACE HEATER AT WORK

NEWS OF THE SOCIETIES

Northern New York Health Officials' Association.—This society has been organized in accordance with a suggestion of James H. Dunham, of Cape Vincent, N. Y., for an organization of members of Board of Health in a county or group of counties. The officers of this association are: James H. Dunham, Cape Vincent, President; Drs. S. A. Russel, Fulton, H. A. Bassett, Lowville, and B. W. Severance, Gouverneur, Vice-Presidents; Dr. A. L. Morgan, Dexter, Secretary. Members of the association must be active health officials and meetings are to be held quarterly or oftener. The objects of the association, as stated in the constitution, are:

First. That our members may be more thoroughly instructed and enlightened in sanitary science.

Second. To acquire a more perfect understanding of the health laws of the State; and

Third. To gain a clear conception of our powers, duties and responsibilities as Boards of Health, and also as citizens.

International Congress on Tuberculosis.—Dr. William C. Woodward, Chairman of the Committee of Arrangements for the Congress to be held at Washington, D. C., September 21 to October 12, has announced the appointment of the Chairmen of the following subcommittees:

Dr. D. Percy Hickling, Chairman Committee on Membership; Mr. Allen D. Albert, Chairman Committee on Publicity; Dr. F. Freemont-Smith, Chairman Committee on Entertainment; Dr. William J. Manning, Chairman Committee on Local Exhibit; Mrs. George M. Sternberg, Chairman Ladies' Committee; Mrs. Robert S. Woodward, Vice-Chairman Ladies' Committee.

Subcommittees: Ladies' Committee: Mrs. Appleton D. Clark, Jr., registration and information; Mrs. Sophie Siebert, Chairman for foreign guests speaking German; Mrs. C. W. Chancellor, Chairman for foreign guests speaking French; Mme. Quesada, Chairman for foreign guests speaking Spanish; Mrs. Charles W. Richardson, Chairman for foreign guests speaking English; Mrs. Charles J. Bell, Chairman for delegates and guests from the United States; Mrs. William C. Eustis, Chairman for trained nurses.

Commissioners Macfarland, West and Morrow are Honorary Chairmen of the District Committee; Dr. M. J. Rosenau and W. H. Baldwin are Vice-Chairmen; George S. Wilson is Secretary, and Charles J. Bell is Treasurer.

Indiana Sanitary and Water Supply Association.—This association was formed at a conference of officers of municipal and private owned water plants of Indiana with the State Board of Health. The purpose of the meeting was to study the sources of water supplies of Indiana, their preservation and purification and to establish standard and uniform methods of analysis. Among the papers read at the meeting was one by M. O. Leighton, Chief Hydrographer of the U. S. Geological Survey, regarding the lowering of the level of ground waters. Geo. W. Fuller, of New York, discussed the management of purification works. F. M. Witherell, Pittsburg, Pa., spoke of filtration plants for small cities. F. A. W. Davis, Indianapolis, spoke of stream pollution. Prof. R. L. Sackett, of Purdue University, spoke of the need of purifying the White river from which Indianapolis derives its supply. Dow R. Guinn, Terre Haute, presented a scheme of accounting. A. H. Kenedy, Rockport, spoke in favor of a public utilities commission. The officers elected include the following: President, H. E. Barnard, State Pure Food Commissioner; First Vice-President, Dow R. Gwinn, Terre Haute; Secretary, Frank Jordan, Indianapolis; Treasurer, Geo. A. Fletcher, Brazil.

Calendar of Meetings

July 24-25.

American Society of Heating and Ventilating Engineers.—Summer meeting, Niagara Falls, N. Y.—W. M. Mackay, Secretary, P. O. Box 1818, New York City.

July 28.

Mayors' League of New Jersey.—Meeting.—Mayor Andrew F. McBride, Chairman, Paterson, N. J.

July 28-30.

Association of Texas Mayors.—Annual meeting, Mineral Wells.—John H. Bonner, President, Tyler.

August 10-12.

International Acetylene Association.—Eleventh Annual Meeting, Chicago, Ill.—A. Cressy Morrison, Secretary.

August 11-14.

American Association of Park Superintendents.—Annual meeting Minneapolis, Minn.—F. L. Mulford, Secretary, Harrisburg, Pa.

August 25-27.

Ohio Electric Light Association.—Fourteenth annual convention, Put-in-Bay Island, O.

August 25-27.

League of Cities of the Third Class of Pennsylvania.—Annual convention, Altoona, Pa.—Thomas H. Grevy, Chairman Committee on Entertainment, Altoona.

August 25-28.

International Association of Fire Engineers.—Annual convention, Columbus, O.—James McFall, Secretary, Roanoke, Va.

September 8-12.

Playground Association of America.—Second annual congress, New York City.

September 21-October 12.

National Association for the Study and Prevention of Tuberculosis.—International Congress, Washington, D. C.—Dr. Henry Barton Jacobs, Secretary, Baltimore, Md.—Dr. Joseph Walsh, Philadelphia, Pa. Special Secretary of the Committee on the International Congress.

September 23-25.

New England Water Works Association.—Annual convention, Atlantic City, N. J.—Willard Kent, Secretary, Narragansett Pier, R. I.

September 29-30.

American Public Works Association.—Annual meeting, Asheville, N. C.

September.

New Jersey State Firemen's Association.—Annual meeting, Atlantic City, N. J.—William Exall, Secretary, 11 Howard street, Newark, N. J.

October 11.

International Roads Congress.—First convention, Paris, France.—President Leithier, l'Inspecteur General des Ponts et Chaussees.

October 12-17.

American Street and Interurban Railway Association.—Twenty-seventh annual meeting, Atlantic City, N. J.

October 20-23.

American Society of Municipal Improvements.—Fifteenth annual convention, Hotel Dennis, Atlantic City, N. J.—A. Prescott Folwell, Secretary, 239 West Thirty-ninth street, New York City.

November 17-20.

National Municipal League.—Annual meeting, Pittsburg, Pa.—Clinton Rogers Woodruff, Secretary, 705 North American Building, Philadelphia, Pa.

November 17-20.

American Civic Association.—Annual Meeting, Pittsburg, Pa.—Clinton Rogers Woodruff, Secretary, 705 North American Building, Philadelphia, Pa.

December 4-5.

New Jersey State Sanitary Association.—Annual Meeting, Lakewood, N. J.—John B. Smith, Chairman, New Brunswick, N. J.

PERSONALS

BALDWIN, HENRY, President of the Buckeye Sewer Pipe Company of Akron, O., died July 13, aged 86 years. More than fifty years ago he embarked in the manufacture of clay products at Middlebury, but in later years had devoted his entire attention to the manufacture of sewer pipe.

CONNER, A. W., Lancaster, N. Y., has been appointed Assistant Engineer to the New York State Water Commission

DAVIDSON, C. W., Mayor of San José,

Cal., has just taken his seat, and at once announced the appointment of the following officials to serve under him:

City Attorney—H. L. Partridge.

Street Commissioner—V. M. Trace.

Deputy Street Commissioner—Charles J. Farrell.

License Collector—John T. Gately.

Fire and Police Commissioners—John S. Mecklem, J. A. Kidward, Walter Kenville.

Library Trustee—Dr. J. L. Asay.

HAMILL, CAPT. TERENCE, Chief of Police of San Juan, Porto Rico, died July 3. Capt. Hamill was formerly an enlisted man in the United States Army, and later served in the Porto Rican Provisional Regiment of Infantry, in which he won the rank of captain.

HANNAN, WILLIAM E., Boston, Mass., has been appointed Water Commissioner, at a salary of \$5,000, by Mayor Hibbard. Other appointments made at the same time were:

Arthur G. Everett, Building Commissioner, \$5,000.

Charles B. Woolley, Sealer of Weights and Measures, \$3,000.

Samuel Carr, Public Library Trustee. Chandler Hovey, Consumptives' Hospital Trustee.

Jacob R. Morse, Cemetery Trustee. William C. Brooks, Trustee of Music Department. John S. Slater, Director Workingmen's Loan Association.

Frederic P. Cabot, Overseer of Poor.

Simon E. Hecht, Overseer of Poor.

John H. Colby, Overseer of Poor.

Margaret J. Gookin, Overseer of Poor.

HOOVER, C. B., Columbus, O., has been appointed chemist of the sewage disposal plant. J. S. Osborn has been appointed engineer to design the proposed garbage reduction plant. Melvin Berlin, formerly engineer of the East Side pumping station, has been appointed engineer of the pumping station of the new filtration plant.

MARKHAM, CAPT. E. M., Corps of Engineers, U. S. A., Assistant Engineer Commissioner, District of Columbia, has been to New York, N. Y., to look into questions relative to street repairing.

MCCLELLAN, GEORGE B., Mayor of New York, N. Y., is visiting the Adirondack Club, thirty-five miles north of North Creek, N. Y., as the guest of Dr. Brewer. Mayor McClellan has with him a supply of fishing tackle and a complete camping outfit, and expects to enjoy the fine sporting advantages of the club to the full.

MOORE, JOHN B., Staunton, Va., has been elected Superintendent of Water.

MORRIS, LEWIS, City Marshal, Perth Amboy, N. J., recently gave a clambake at William Walter's Beach to Chief of Police Burke, most of the members of the police force, Mayor Bollscheiler, the members of the Board of Aldermen, a number of city officials and many guests.

MUNN, W. G., Alderman, Louisville, Ky., has resigned to succeed R. I. James as a member of the Board of Public Safety.

PURDIE, THOMAS S., Norfolk, Va., has been elected a member of the Board of Control, to succeed the late R. Henry Jones.

REYNOLDS, W. S., Chief of Police, Colorado Springs, Col., has received word from President Richard Sylvester of the International Association of Police Chiefs, announcing his appointment as a member of the governing board of the organization.

SCHEFFLER, JOSEPH, Louisville, Ky., John Marshall, I. W. Bernheim and Harry Phillips have been elected Directors for the City by the Louisville Gas Company.

SCHUNK, A. H., Mayor of Dubuque, Ia., who recently disappeared from the city has been located in a Trappist monastery eighteen miles from Dubuque where, it is stated he has been following out the rigid discipline of the monks.

TRADE NOTES

Iron Pipe.—Chicago: Few large requirements are in sight at present, but a fair volume of small orders develop. Quotations: 4-inch, \$27; 6 to 12-inch, \$26; 16-inch and up, \$25. Birmingham: Contrary to expectations, there has been no advance in quotations, but recent departures from the established price have been slight. Quotations: 4 to 6-inch, \$23; 8 to 12-inch, \$22; over 12-inch, \$21. San Francisco: Business is improving and bids have been taken on a number of moderate-sized contracts. Quotations: 4-inch, \$37; 6 to 12-inch, \$36, f. o. b. Pacific Coast Terminals. New York: Inquiries are more numerous. At an early date a considerable tonnage will be required for the city. Quotations: \$24.50 to \$25 for 6-inch.

Lead.—The lead market is steady. The American Smelting and Refining Co.'s price is firmly held at 4.50c., but there is a lack of interest on the part of consumers. The Metal Exchange quotes the market at 4.40@4.55c. The St. Louis market is dull at 4.27@4.30c. In London Spanish is quoted steady at £12 17s. 6d and English at £13 10s.

Water Purifying Plant.—Arthur A. Brown, Pittsburgh, Pa., representative of the Westinghouse, Church, Kerr Company, New York City, has completed the construction of a plant for the purification of the water supply of the Homeopathic Hospital, Pittsburgh, which is the first of its kind in commercial operation in the United States. The water supply is purified by the Girard Ozone process, which consists of apparatus for producing ozone from the oxygen in the air by an electric current of high potential power. Ozone is also carried to all parts of the hospital by a system of piping, where it is used for ventilation, sterilization and in surgery.

Big Tunnel Station.—In addition to building a half-million-dollar trolley car terminal over the Hudson tunnel entrance at Hoboken, N. J., the Public Service Railway Company is making plans to construct a larger and more costly terminal at Exchange Place, Jersey City, where the main Hudson tunnel station on the New Jersey side of the river has been constructed under the Pennsylvania railroad station. An entrance opening on Exchange Place has been constructed, but the Public Service Company is planning with the tunnel company to convert the working tunnel under Exchange Place into an underground passageway for trolley passengers. This tunnel extends from the station under the train shed to York street, having an opening at the rear of the trolley sheds. It is planned to erect a large terminal building, with tracks on the lower floor and offices for the company on the upper floors. Plans will also be made to connect this building with the Pennsylvania ferryboats, so that persons preferring to use the ferryboats may have an easy means of reaching the boats. It is further planned to change some of the Jersey City trolley lines so that they will terminate at Henderson street and Newark avenue, where there will be another station for the tunnel.

Track Elevation.—The Whitehall Portland Cement Company, Philadelphia, Pa., in its little monthly bulletin, "Cementology," for June, illustrates a number of structures built of concrete in connection with the work of the Atlanta and West Point Railway in eliminating grade crossings in the city of Atlanta, Ga.

Electrical School.—The Bliss Electrical School of Washington, D. C., has recently purchased the North Takoma Hotel, Takoma Park, Md., and workmen are engaged in overhauling and remodeling the building to make it adaptable for school purposes. The property contains four and a half acres just across the District line in Maryland. The building, which is four stories high, with numerous towers and bay windows and spacious porches along the entire frontage, will be remodeled at a cost of \$20,000.

INCORPORATIONS

Beaver Dam Fuel and Light Co. Beaver Dam, Wis.; capital, \$85,000. Incorporators: D. N. Pettigrew and others.

Campbellsport Electric Light and Power Co. Campbellsport, Wis.; capital, \$10,000. Incorporators: John F. Sharp, Richard Arthur Sharp and M. H. Brand.

Chicago-Oregon Construction Co. Oklahoma City, Okla. Incorporators: A. J. McMahon, Oklahoma City; H. T. Fubbins and Benjamin Kaufman, Chicago, Ill.

Fitzgerald Automatic Safety Gate and Signal Co. Danville, Va.; capital, \$5,000. Incorporators: T. S. Williams, President; J. H. Fitzgerald, Vice-President; E. T. Lewis, Treasurer; B. S. Motley, Secretary.

Florida Trackless Trolley Co. Boston, Mass.; transportation; capital, \$200,000. President, A. B. Upham, Malden; treasurer and Clerk, F. H. Sylvester, Hull.

Grim Gustafson Engineering Co. Chicago, Ill.; engineering and general contracting; capital, \$6,000. Incorporators: William H. Beckman, Ellsworth T. Martin, Delbert E. Enochs, Delbert R. Enochs, 907 Teutonic Building, Chicago, Ill.

Gross Electric Co. Hoboken; electricians, mechanical engineers, etc.; capital, \$25,000. Incorporators: Henry Wilkens, Charles B. Wilkens, Samuel Gross, as above.

Guymon Electric Light and Power Co. Guymon, Okla.; capital, \$40,000. Incorporators: J. H. Wright, R. S. Cox and others.

Halcottville Water Co. Hobart, N. Y.; to supply water to Halcottville, N. Y.; capital, \$5,000. Incorporators: George A. Buckle, A. L. O'Connor, James R. Cowan, Hobart, N. Y., and others.

John A. Monahan Contracting Co. Brooklyn, N. Y.; excavating, grading and paving; capital, \$5,000. Incorporators: John D. Watson, 153 Russell street; Marie Monahan and John E. Monahan, St. George Hotel, all of Brooklyn.

Lathrop Light, Heat and Power Co. Lathrop, Mo.; capital, \$5,500. Incorporators: W. C. Young, H. C. Shepherd and others.

Morningside Construction Co. New York, N. Y.; general contractors; capital, \$20,000. Incorporators: James F. Ahearn, 370 West One Hundred and Eighteenth street; John Hallahan, 49 West One Hundred and Thirtieth street; Michael Tully, 211 West One Hundred and Seventh street, all of New York.

National Fire Appliance Exposition Co. New York, N. Y.; amusements; capital, \$10,000. Incorporators: Joseph P. Morrissey, 219 West Forty-second street; Elwood M. Johnson, 229 West Forty-fifth street; Joseph D. Byrne, 1968 Seventh avenue, all of New York.

Oklahoma Paving and Construction Co. Ardmore, Okla.; capital, \$15,000. Incorporators: J. D. Flynn, President; W. A. Hardin, vice-president; George C. Anderson, secretary and treasurer.

Onondaga Independent Telephone Co. Syracuse, N. Y.; telephone line; capital, \$1,500,000. Incorporators: George R. Fuller, W. Roy McCanne, Joseph W. Taylor, Edward W. Peck, Rochester; Alexander H. Cowle, John B. Pierce, Hendrick S. Holden, Syracuse, as above.

Tennessee Metal Culvert Co. Nashville, Tenn.; capital, \$25,000. Incorporators: Geo. H. Charles, Lewis G. Anderson, Frank U. Putney, Milton J. Flick and Hugh Morris.

Texas Power Co. Houston, Tex.; capital, \$50,000; to manufacture, sell and supply gas, light, heat and electric power from its plant at Lake Charles, La. Incorporators: Charles A. Cleaver, Charles S. Cleaver, J. A. Read and others.

Winnetka Gas Co. Chicago, Ill.; to manufacture gas and its by-products; capital, \$5,000. Incorporators: Harry H. Phillips, Rollie M. Cole, Stephen A. Day.

Wood Construction Co. Springfield, Mo. Incorporators: John S. Wood, W. J. Wood and John M. Wood.

PATENT CLAIMS

892,450. Pressure-Reducing Valve. Thomas Robinson, Low Bentham, England. Serial No. 418,882.

In a pressure reducing valve, the combination, with a high-pressure cylinder provided with an inlet nozzle at its front end and having a perforated guide-ring adjacent to the said nozzle, of a low-pressure cylinder secured to the rear end of the high-pressure cylinder and provided with an outlet at its rear end, a packing-ring secured to the adjacent ends of the said cylinders, a tubular piston-rod which slides in the said guiding and packing-ring and which has a hole in its front end portion for connecting the two said cylinders, a valve for closing the said inlet-nozzle carried by the front end of the said piston-rod, and a piston secured on the rear part of the said piston-rod and slidably in the said low pressure cylinder.

892,486. Process for Purifying Water and Sewage. Albert E. Woolf, New York, N. Y. Serial No. 410,371.

The process of treating liquid to be filtered, whereby the filter bed shall be maintained in operating sterile condition, consisting in adding a small percentage of electrolytically produced disinfecting solution to said liquid prior to complete filtration.

892,496. Concrete-Mixing Apparatus. Alfred G. Axelson, Orleans, Neb. Serial No. 393,267.

In apparatus of the character described the combination with mixing apparatus and means for actuating the mixing apparatus; of a screen, a hopper located thereunder and disposed to direct material into the mixing apparatus, oscillatory means for simultaneously shifting the screen and hopper in opposite directions, a pulley shiftable into or out of engagement with the actuating means of the mixing apparatus, and means for transmitting motion through said pulley to the screen and hopper.

892,581. Filtering-Well. Gustave Chenot, Brussels, Belgium. Serial No. 345,627.

In a filtering well, the combination, with the filtering part of the well, of a casing surrounding said filtering part, said casing being divided into vertical sections, means for guiding said sections for movement vertically, ropes attached to said sections and extending therefrom upwardly, hollow blocks arranged in the filtering part of the well, and a pulley arranged in each hollow block, each rope being extended over a pulley, substantially as described.

892,768. Electric-Arc Lamp. Charles P. Steinmetz, Schenectady, N. Y., assignor to General Electric Company, a corporation of New York. Serial No. 109,600.

The combination in an electric arc lamp, of means for creating within the lamp a circular air current carrying smoke and other products of combustion from the arc, and means for depositing said products at a predetermined point in the air circuit.

892,942. Garbage Plant. Thomas W. Draine and Thomas F. Shingledecker, McKees Rocks, Pa.; said Draine assignor to said Shingledecker. Serial No. 367,555.

A furnace of the character described comprising side walls, an end wall, a cover, a stack, a transversely-extending partition arranged at the rear of the furnace and at a point removed from the end wall and forming a chamber with which the stack communicates, a transversely-extending partition arranged forwardly of the first mentioned transverse partition, a short longitudinal partition interposed approximately centrally of and between said transverse partitions and forming in connection therewith a pair of compartments, said side walls formed with outlets for said compartments, said first mentioned transverse partition having a pair of openings forming thereby means for establishing communication between said compartments and chamber, a longitudinal partition extending from said forward transverse partition to and flush with the forward end of the side walls, thereby forming a pair of elongated longitudinally-extending chambers, said front having openings provided with closures, a bridge wall arranged forwardly of each of the longitudinal chambers and of less height than the front wall, grate bars supported by the bridge and front wall, a plurality of transversely-extending supporting members positioned in each of the longitudinally chambers at a point approximately centrally of the top and bottom thereof, grate bars mounted upon said members, means for establishing communication between each of the longitudinal chambers and one of said compartments, said means out of alignment with the openings in the rearward transverse partition, said side walls having outlets for said longitudinal chambers, and said cover provided with a closeable inlet opening for each of said longitudinal chambers.

THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Buildings, Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we can not guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
Street Improvements				
Missouri	Kansas City	July 23, 11 A.M.	Artificial stone sidewalks, 18 sts.; curbing 6 streets	J. L. Darnell, City Engineer.
New York	New York	July 23, 3 P.M.	Furn. and laying 10,000 gals. crude oil mixture, asphalt base	Henry Smith, Pres. Park Bd.
New York	New York	July 23, 3 P.M.	Repair and resurface asphaltic earth, Br. and Peb. Parkway	Henry Smith, Pres. Park Bd.
North Dakota	Grand Forks	July 23, 5 P.M.	Paving 50,000 sq. yds. of street	J. J. Smith, City Engineer.
Virginia	Roanoke	July 23	Street improvements, inc. Mack paving block on Campbell Ave., bitulithic and macadam, Wells Ave repairing, Salem Ave.; brick and granolithic walks, etc., various sts.	
Iowa	Des Moines	July 24, 11 A.M.	Brick paving, 1,420 sq. yds., 3 sts., concrete curb, 724 ft.	W. B. Bates, City Engineer.
Pennsylvania	Harrisburg	July 24, noon	Paving, etc., Oliver alley, asphalt resurface Walnut St.	G. F. Poorman, City Clerk.
Maine	Gardiner	July 24, 2 P.M.	Bldg. section of State road, 1,750 ft. long	W. W. Caldwell, Hwy. Com'r.
New Jersey	Hackensack	July 24, 3 P.M.	Improving Paterson plank road in Bergen County	Will C. Atkins, Mayor.
Pennsylvania	Knoxville	July 24, 7 P.M.	Paving, curbing and grading, Rentsz alley	Board of Chosen Freeholders.
Ohio	Mansfield	July 24	Grading and macadamizing 27,500 sq. yds., 7 sts., etc.	A. Betsmeyer, Chm. St. Com.
Ohio	Wadsworth	July 25, noon	Brick paving, curb, grading, draining, etc., High St.	S. F. Boll, Pres. Bd. Pub. Serv.
Ohio	New Philadelphia	July 25, 1 P.M.	Constructing concrete sidewalk	Louis F. Allen, Village Clerk.
Wisconsin	Sheboygan	July 25, 4 P.M.	Brick paving, curb and gutter nr. fire station	A. V. Donahey, County Auditor.
Alabama	Birmingham	July 25	Slagging and cherting Blue Creek road	John Kummer, Chm. Bd. Pub. Wks.
Ohio	Lorain	July 25	Paving Franklin and Washington sts.	John T. Reed, Pres. Bd. Revenue.
Ohio	Ravenna	July 25	Vit. or asphalt block paving, etc., 5 sts., 32,960 sq. yds.	Board of Public Service.
Virginia	Fort Myer	July 27, 11 A.M.	Grading, filling drains and extending road	E. W. Marvin, Village Clerk.
Indiana	Greensburg	July 27, noon	Bldg. free gravel road 22,520 ft. long, between two Counties	Capt. B. B. Hyer, Q. M., U. S. A.
Ohio	St. Bernard	July 27, noon	Granite paving on concrete and curb, Carthage Pike	Frank E. Ryan, County Auditor.
Ohio	Toledo	July 27, noon	Paving St. James Court, from Broadway to Foraker ave.	J. A. Stewart, Village Engr.
Ohio	Columbus	July 27, noon	Grading, macadamizing, etc., 3 rds. 3 1/11, 3 3/11 and 1 1/11 miles	Reynold Voit, Sec'y B. P. S.
Wisconsin	Appleton	July 27, 5 P.M.	Vit. brick paving on concrete, portion Lake St.	John Scott, Clk. County Com'rs.
Ohio	Elyria	July 27	Brick paving, E. River st.; paving 1,125 lin. ft. Clark st.	E. L. Williams, City Clerk.
Ohio	Findlay	July 28, noon	Bldg. stone road, Van Buren tp.; also 2 miles, Orange tp.	Board of Public Service.
Ohio	Columbus	July 28, noon	Grading and macadamizing 2 1/2 miles of road	A. J. Overholt, Chm. Co. Com'rs.
Iowa	Iowa City	July 28, 2 P.M.	Paving, etc., 6 streets	Jas. C. Wonder, State Hwy. Com'r.
Indiana	Shelbyville	July 28, 7:30 P.M.	Constructing several miles of cement sidewalk	Chas. Maganon, City Eng'r.
Ohio	Greenville	July 28	Furnishing 800 cu. yds. crushed stone f. o. b., Greenville	H. J. Clark, City Clerk.
Ohio	Columbus	July 29, noon	Brick or block paving, etc., 7 sts.	Board of Public Service.
Ohio	Carrollton	July 29, noon	Improving W. Main St., inc. 6,206.33 sq. yds. vit. block paving; 3,538 lin. ft. straight, 104 ft. circular curb and 200 ft. headers; 250 ft., 15 and 440 ft., 10-in. drain, catch basins.	E. W. Hirsch, Sec'y Bd. Pub. Serv.
Ohio	Cleveland	July 29	Furn. material and repairing 8 roads	
Ohio	Mansfield	July 30, noon	Grading and macadamizing 2,070 ft. road, Weller twp.	
Pennsylvania	Pittsburg	July 30	Rebuilding 8 1/2 miles Little Deer Creek Valley Road	
New Jersey	Newton	July 31, 11 A.M.	Grading and macadamizing 3 1/2 miles road in County	
Indiana	Anderson	August 1, 2 P.M.	Constructing 2 1/2 separate gravel roads, aggregating 50 miles.	
Wisconsin	Fond du Lac	August 1, 3 P.M.	Improving portion of Forest avenue	
New Jersey	River Vale	August 1, 7 P.M.	Macadamizing Leslie and Westward Aves.	
Indiana	Greencastle	August 1	Bldg. 5,286.6 ft. macadam road; also 10,833.9 ft., Jeff. twp.	
Florida	Jacksonville	August 3, 2:30 P.M.	Vit. block paving, and grading 5,200 sq. yds.; 2,796 lin. ft. curb, etc., Fourth St., also 10,000 sq. yds. vit. bk. pav., Myrtle St.	
New York	Yonkers	August 3, 8 P.M.	Regulating, grading and improving certain streets	
Washington	Olympia	August 3, 5 P.M.	Paving, 7,500 sq. yds., any material, 4th and Col'bia sts.	
Indiana	Delphi	August 3	Heavy st. grading, cement curb and gutter, sidewalks, etc., \$30,000.	
Indiana	Sullivan	August 3	Constructing 1,320 ft. of stone road	
Indiana	Tipton	August 3	Bldg. 5 macadam roads, 42,738 ft. long, Madison twp.; 9 roads 57,557 ft., Liberty twp.; 2 gravel, 4,094 ft., Jeff. twp.	
Indiana	Vincennes	August 4, 2 P.M.	Constructing 2,681 ft. gravel road in Vincennes twp.	
Georgia	Rome	August 4, 4 P.M.	Wood block, brick, etc. paving, 41,000 sq. yds., concrete base, 12,000 lin. ft. granite curb, 12,000 cu. yds. exc.	
Ohio	Carrollton	August 5	Vit. block paving, etc., 6,262 sq. yds. W. Main St.	
Indiana	Muncie	August 5	Constructing 2 gravel roads in Liberty township	
Indiana	Bloomington	August 5	Constructing 7 gravel roads	
Pennsylvania	Emsworth	August 6, 5 P.M.	Cement sidewalks, 9,000 sq. ft., curbing 1,800 lin. ft.	
Ohio	Canton	August 7	Bldg. sub-grade and macadamizing Brookville & Greenville road.	
Wisconsin	Oshkosh	August 8, noon	Asphalt paving, grading, comb. curb and gutter, Jackson street.	
New Jersey	Verona	August 10, 3 P.M.	Grading and laying Telford pavement on Fairview ave. in Boro.	
Ohio	Ashtabula	August 10	Vit. block paving, curbing, grading, etc., No. Ridge road.	
Ohio	Columbus	August 12, 2 P.M.	Macadamizing, grading, etc., 3,285 ft.; also viaduct approach...	
Water Supply				
New York	New York	July 23, 11 A.M.	Bldg. portion Catskill aqueduct, inc. 6 1/2 miles cut and cover aqueduct, 17x17 1/2 ft.; 3,470 ft. 17x13 1/2 ft. tunnel, etc.	J. Waldo Smith, Ch. Eng'r Bd. W. S.
Virginia	Emporia	July 23, 8 P.M.	Furn. latest imp. gasoline engine, single-action triplex pump, 750 gals., to work against constant pressure 130 lbs. to in.; direct connection with gasoline engine.	
Oklahoma	Clinton	July 23	Drilling 65 ft. well, 20 ft. diam., walled with brick.	
Texas	Houston	July 27, 3 P.M.	Erecting 15,000,000-gal. pumping engine with plans, etc.	
California	Los Angeles	July 27	Bldg. Jawbone div. Los Angeles aqueduct, cap. 400 second ft., inc. 43,000 lin. ft. lined tunnel; 60,000 ft. lined conduit; 340,000 cu. yds. excavation, etc.	
Pennsylvania	Philadelphia	July 29, noon	Extension of fire main system; restoring sand to filters; sluice gates for Torres. fil. plant; furn. 400 tons 48-in. c. i. pipe, etc.; surface condenser; furn. 5,000 lengths 6 in., 600 of 8-in., 250 of 10-in. pipe; in all, 1,300 tons, etc., 8 contracts.	
Illinois	New Boston	July 29	Pumping plant and accessories.	
Florida	Pensacola	July 30, noon	Furn., erecting, etc., air compressor to lift 2,000,000 gals from 13 driven wells to reservoir, also receiver.	
Minnesota	Janesville	July 31, 7:30 P.M.	Installing water works system, inc. furn. and laying 25 tons c. i. pipe, specials and hydrants; 10 h.p. gasoline engine and deep well pump; steel tower and 65,000-gal. steel tank; brick pumping station.	
Dist. of Col'b'a	Washington	August 1, noon	Furnishing cast iron water pipe specials.	J. J. Flather, Minneapolis, Eng'r.
Pennsylvania	Pittsburg	August	Bldg. 10 new filter beds; estimate \$650,000.	Jay J. Morrow, Eng'r Com'r.
New York	Fort Wood	August 3, 10:45 A.M.	Lowering water pipe at this post.	A. B. Shepherd, Dir. Pub. Wks.
Washington	Bremerton	August 4	Constructing water supply system at Naval Magazine.	G. C. Burnell, Cons. Q. M., U. S. A.
Ohio	Cincinnati	August 7, noon	Bldg. storehouse at bridge approach to intake pier.	Bur. Sup. & Accts., Navy Dept., Washington, D. C.
Virginia	Danville	August 13, noon	Addition to bldg. and mech. filter plant, State Hospital for Insane.	Elmer G. Prior, Clk. Water Com'rs.
				Dr. H. B. Meredith, Supt. St. Hosp.

Sewerage

Missouri	Kansas City	July 23, 11 A.M.	Constructing district sewer in Dists. Nos. 190 and 302.	J. L. Darnell, City Engineer.
Texas	Galveston	July 23, noon.	Bldg. rein. concrete drain 3,681 ft. long on 45th St.	A. T. Dickey, City Engineer.
New York	Syracuse	July 23, 4 P.M.	Imp. Onondaga Crk., 2½ miles long, inc. 76,000 cu. yds. excavation and 14,800 cu. yds. concrete blocks and mass concrete.	Henry J. Hamlin, Secy. Sewer Bd.
Minnesota	Winnebago	July 23, 8 P.M.	Constructing 930 ft. 8-in. pipe sewer.	J. H. Sherin, Village Clerk.
Ohio	Cleveland	July 23.	Constructing 8½ ft. sewer; cost, \$60,000.	A. J. Callow, Secy. Bd. Pub. Serv.
Kansas	Pratt	July 24, noon.	Constructing sewerage system.	City Clerk.
Pennsylvania	Philadelphia	July 24, noon.	Constructing main sewers, under Schedule B.	Geo. R. Stearns, Dir. Pub. Works.
Ohio	Dayton	July 24, noon.	Bldg. storm water sewers, 5 sts., inc. 12 to 48-in. pipe & concrete.	J. C. Ely, Pres. Bd. Pub. Serv.
Pennsylvania	Harrisburg	July 24, noon.	Constructing sewers in Walnut, Logan and Briggs sts.	W. W. Caldwell, Com'r Hwy. Dept.
Wisconsin	Janesville	July 24, 2 P.M.	Furn. material and labor for work in 8 sewer dist., and main outlet sewer, inc. 39,797 ft., 8 to 48-in. sewer.	S. B. Heddles, Mayor.
New York	Lancaster	July 24, 8 P.M.	Bldg. system of sewerage, inc. sewage disposal plant.	Fairchild & Gatchel, Consult. Engrs.
Ohio	Holgate	July 24.	Bldg. vit. pipe main outlet, sewer Dist. No. 1, in Hamler.	W. L. Mac Intyre, Village Clk.
South Dakota	Aberdeen	July 27, 8 P.M.	Bldg. sewer extensions, inc. 2890 ft. 20-in., 4,000 ft. 18-in., 3,600 ft., 15-in., 366 ft. 12-in., 900 ft. 8-in. pipe, 30 manholes.	F. W. Raymond, City Auditor.
California	Fresno	July 28, 10 A.M.	Constructing sewer system for County Farm, etc.	Scott McKay, County Surveyor.
Minnesota	Virginia	July 28, 8 P.M.	Constructing sewer.	City Clerk.
Virginia	Portsmouth	July 28, 8 P.M.	Bldg. san. sewer system for 5th Ward; 9 miles 24 to 8-in. pipe.	Bascom Sykes, City Engineer.
New York	Binghamton	July 29.	Constructing Spring Forest Ave. and Spruce st. sewers.	John A. Giles, City Engineer.
Massachusetts	Boston	July 31, 2:30 P.M.	Bldg. 1,305 ft. 69 x 72 in. concrete sewer; 1,135 ft., 72 x 48 in. brick and concrete sewer; 300 cu. yds. Portland brick masonry; 3,000 cu. yds. concrete masonry in trench; 300 cu. yds. rock excavation in trench; invert of sewer 8 to 26 ft. below street surfaces; work in Brighton for So. Met. system.	Wm. M. Brown, Ch. Eng. Met. Water and Sewer Board.
New York	Yonkers	August 3, 8 P.M.	Constructing sewer in portion of Van Sice ave., 724 ft.	Jas. D. McIntyre, Sec'y Bd. C. & S.
Alabama	Sheffield	August 5, 5 P.M.	Bldg. 1,492 ft. 8-in. pipe sewer, av. cut 7 ft.	C. L. Peckinpaugh, City Engineer.
Georgia	Toccoa	August 8.	Bldg. sewer system from Court House, inc. 2,700 ft. terra cotta pipe, 6 to 15 inches.	B. P. Brown, Jr., Ordinary.

Public Buildings

New York	New York	July 23, 3 P.M.	New steam supply mains, etc., bldgs. in Central Park.	Henry Smith, Pres. Park Board.
Kansas	Emporia	July 23, 3 P.M.	Erecting physical development bldg. for State Normal School.	John F. Stanton, Topeka, State Ar't.
Illinois	Alton	July 23, 3 P.M.	Constructing, complete, U. S. Post Office.	James Knox Taylor, Wash., D. C.
Wisconsin	Sturgeon Bay	July 23, 7 P.M.	Erecting high school bldg.; Foeller & Schober, Green Bay, Architects.	Board of Education.
New York	New York	July 24, 10 A.M.	Alterations, repairs, etc., 8 station houses; bldg. one.	Theo. Bingham, Police Com'r.
New York	New York	July 24, 11 A.M.	New plastic slate roofs, metal ceilings, etc., Normal College.	Henry H. Sherman, Dep't of Educ'n.
Ohio	Toledo	July 24, noon.	Erecting school for Washington tp.; C. W. Phelps, Pres. Bd. Ed.	Bacon & Huber, Spitzer Bldg., Archs.
Illinois	Belleville	July 24, 3 P.M.	Constructing, complete, U. S. Post Office.	James Knox Taylor, Wash., D. C.
Indiana	New Middletown	July 25, 2 P.M.	Erecting school for Webster township.	Nicholas Eve, Trus. Webster Twp.
West Virginia	Rivesville	July 25.	Erecting school bldg.; A. C. Lyons, Fairmount, Arch.	J. W. Smith, Sec'y School Bd.
Virginia	Tazewell	July 25.	Bldg. 2-story school, 60 x 80 ft., wings 20 x 30 ft.; cost, \$18,000.	Walter J. Smith, Bramwell, W. Va., Architect.
New York	New York	July 27, 11 A.M.	General construction, repairs, etc., various school bldgs.	C. B. J. Snyder, Supt. Sch. Bldgs.
Ohio	St. Bernard	July 27, noon.	Bldg. addition to Town Hall; A. Kuntz, Cincinnati, Archt.	George Schroeder, Village Clerk.
Ohio	Byeaville	July 27, noon.	Bldg. 8-room school; H. O. Wurmsser, Lorain, Archt.	Chas. R. Austin, Clk. Bd. Educ'n.
Montana	Butte	July 27, 3 P.M.	Extension, remodeling, etc., U. S. Post Office.	James Knox Taylor, Wash., D. C.
Texas	San Marcos	July 27.	Erect. \$70,000 Court House; C. H. Page & Bro., Austin, Archs.	Edward R. Kone, County Judge.
South Dakota	Veblen	July 27.	Erecting school; plans, etc., with Geo. F. Anderson.	O. P. Akre, Clk. School Bd.
Texas	Houston	July 27.	Bldg. 2-story and base school; 4 separate contracts.	H. B. Rice, Mayor.
Oklahoma	Rush Springs	July 27.	Bldg. 8-room brick school, complete, with steam heat.	G. Kamal, Clk. Bd. Education.
Georgia	Augusta	July 28, noon.	Bldg. \$150,000 City Hall; 2 stories, 94x184 ft. brick, stone trim.	L. F. Goodrich, 115 Eighth St., Arch.
Iowa	Lewis	July 28.	Installing steam heating plant for high school bldg.	H. G. Cotton, Sec'y Bd. Educ'n.
New York	New York	July 29, 10 A.M.	Furn. and installing 2 new boilers, etc., Kingston ave. Hosp.	Dr. Thos. Darlington, Pres. Bd. H'lth
Kansas	Lawrence	July 30, noon.	Erecting County jail and sheriff's residence.	A. Frank Kerms, County Clerk.
Arizona	Florence	July 30, noon.	Bldg. Terry, prison; also cells and other work for prison.	Thornton Fitzhugh, Phoenix, Arch.
Maine	Portland	July 30, 3 P.M.	Constructing, complete, U. S. Court House.	James Knox Taylor, Wash., D. C.
New York	New York	July 30, 3 P.M.	Erecting Administration Bldg. in Bronx Park.	Henry Smith, Pres. Park Board.
Iowa	Burlington	July 30.	Bldg. \$130,000 high school; 2-story and base, 175 x 147 ft.; paving brick, Bedford stone and marble, concrete floor, etc.	D. S. Cooper, Sec'y Bd. Educ'n.
Wisconsin	Milwaukee	July 31, 3 P.M.	Plans, etc., for detention house and juvenile court bldg.	F. O. Phelps, County Clerk.
Iowa	St. Charles	August 1, noon.	Erecting fire station and jail.	P. S. Wise, Mayor.
Arkansas	Mena	August 1.	Complete plans for \$200,000 brick and stone high school.	M. B. Legate, Sec'y Bd. Educ'n.
Pennsylvania	Wilkinsburg	August 1.	Competitive plans for Mechanical Arts High School, 62 rooms; Architects all over country invited to submit plans.	Board of Education.
Minnesota	St. Paul	August 1.	Bldg. ad. to Co. Hosp. on Co. farm; lining jail with rein. conc.	Com. on Schools, School Bd.
Kansas	Atchison	August 3, noon.	Plans for 2-story engine house from local architects.	Edward Iverson, County Clerk.
Connecticut	Hartford	August 3, noon.	Building annex to County Asylum.	Chas. E. Parker, Chm. Bldg. Com.
Indiana	Rochester	August 3, 2 P.M.	Complete construction of jail building.	Geo. W. DuBois, County Auditor.
California	San Fernando	August 3, 2 P.M.	Erecting high school bldg.; W. E. Benns, Architect.	C. G. Keyes, County Clerk.
Alabama	Bessemer	August 3.	Constructing new engine house.	Board of Education.
Connecticut	Hartford	August 3.	Bldg. market house with auditorium for seating 3,000.	Chas. E. Parker, Chr. Bldg. Com.
Texas	Beaumont	August 4.	Plans for \$75,000 fire-proof school, Col. Agr. & Normal Inst.	J. G. Sutton, City Secretary.
Oklahoma	Langston	August 7.	Reconstruction of and repairs to Federal Bldg.	J. L. Mitch, Clk. Bd. Regents, Guthrie.
California	San Francisco	August 10, 3 P.M.	Constructing, complete, U. S. Post Office.	James Knox Taylor, Wash., D. C.
Indiana	Bedford	August 11, 3 P.M.	Bldg. \$500,000 Court House, Lang & Witchell, Dallas, Archs.	James Knox Taylor, Wash., D. C.
Texas	Houston	August 11, noon.	Plans, etc. for \$25,000 boy's dormitory and \$60,000 woman's bldg.	Harris County Commissioners.
Oklahoma	Stillwater	August 12, 2 P.M.	Constructing, complete, Federal Building.	R. E. Chandler, Okla. & M. Col.
South Carolina	Anderson	August 12, 3 P.M.	Erecting, plumping and heating school building.	James Knox Taylor, Wash., D. C.
South Carolina	Manning	August 12.		Edwards, Walter & Parnham, At-lanta.
Virginia	Petersburg	August 19, 3 P.M.	Extension, remodeling, etc., Federal Bldg.	James Knox Taylor, Wash., D. C.
Utah	Logan	August 24, 3 P.M.	Constructing, complete, U. S. Post Office.	James Knox Taylor, Wash., D. C.
California	Santa Rosa	August 27, 3 P.M.	Constructing, complete, U. S. Post Office.	James Knox Taylor, Wash., D. C.
Minnesota	St. Paul	September 1, noon.	Plans for mech. arts high school; 3 prizes.	Dr. Christian Fry, Pres. Bd. Sch. Insp.
Mississippi	Charleston	September 8.	Bldg. \$20,000 school; 3-story brick, 72 x 86 ft., electric light.	P. J. Krouse, Meridian, Archt.
Wisconsin	Green Bay	September 23, noon.	Erecting Court House; sep. bids for plumbing, heat., etc.	C. E. Bell, N. W. bldg., Minpls., Minn.

Bridges

Illinois	Bloomington	July 23, 2 P.M.	Bldg. rein. concrete arch bridge over Sugar Creek at Fell ave.	E. H. Packard, Clk. Bd. Local Impt.
Pennsylvania	Philadelphia	July 24, noon.	Constructing bridges, under Schedule A.	Geo. R. Stearns, Dir. Dept. Pub. Wks.
New Jersey	Hackensack	July 24, 4 P.M.	Bldg. bridge over Hack. river, near R. R. ave.	Board of Chosen Freeholders.
Ohio	New Philadelphia	July 25, 1 P.M.	Building 11 culverts, also 2 retaining walls, etc., in county.	A. V. Donahey, County Auditor.
Texas	San Antonio	July 25.	Lowering Houston st. bridge; J. E. Van Riper, Asst. C. E.	A. T. Lockwood, Chm. Com. Sts. and Boroughs.
Ohio	Youngstown	July 27, 11 A.M.	Bldg. sub. and super-structure, bridge over Mill crk, Berlin twp.	Will B. Jones, County Auditor.
Ohio	Springfield	July 28, noon.	Bldg. bridge over Buck creek and head race, Sherman ave. an 1 Nelson st.	Wm. H. Mahoney, Clk. B. P. S.
Ohio	Upper Sandusky	July 28, noon.	Bldg. stone abut. and replanking bridge in Tymochtee twp.	J. N. Traxler, County Auditor.
Michigan	Upper Sandusky	July 28, noon.	Bldg. stone abutments for Johnson borough in Tymochtee twp.	C. I. Goodwin, Chm. Co. Com'rs.
Indiana	Ionia	July 28.	Constructing steel span bridge; new bids.	
Indiana	Fort Wayne	July 29, 10 A.M.	Bldg. bridge 177 ft. long; changing steel bridge 117 ft. long from 20 to 16 ft. roadway; concrete piers for same; also for 5 concrete culverts and 5 abutments.	G. W. Lindemuth, County Auditor.
Illinois	Chicago	July 29, noon.	Equip. with machin. for operating 2 swing bridges, motors, etc.	S. J. Bryan, Clk. Sanitary Dist.
Illinois	Chicago	July 29, noon.	Equipment of Ninth and 16th St. bridges.	R. R. McCormick, Pres. Bd. Trus. San. Dist.
Ohio	Cincinnati	July 31, noon.	Bridge construction at Eighth street.	John J. Wenner, Clk. Bd. Pub. Serv.
Tennessee	Benton	August 3, noon.	Bldg. 3 steel highway bridges; sub. of all and super of each separate; concrete, 2,000 cu. yds.; steel, 45,000 lbs.	County Court Clerk, Polk Co.
Ohio	Van Wert	August 3, noon.	Mat. and labor, sub and superstructure, bridge over M and E canal, Third St., Delphos; vertical lift or bascule type.	W. H. Troup, County Auditor.
Kansas	Newton	August 3, 2 P.M.	Building bridge in Emma township.	B. O. Hagen, County Clerk.
Indiana	Delphi	August 3.	Bldg. bridge over cut, 50 ft. span, grading, etc.	W. H. Bradshaw, City Engineer.
Oklahoma	Hobart	August 3.	Extension of north fork bridge, east of Granite.	County Commissioners.
Michigan	St. Jostph	August 12.	Bldg. swing bridges and approaches over St. Jos. river.	Harry L. Murphy, City Clerk.
Oklahoma	Hobart	August 13, 10 A.M.	Bldg. extension to bridge between Granite & Lone Wolf.	C. H. Fawks, County Clerk.

Lighting and Electricity

Pennsylvania...	Wilkes-Barre....	July 23, noon.....	Lighting certain sts. with electric arc lights for 3, 5 and 7-yr. terms, from July 1, 1900; \$5,000 check with bid.....	R. H. Richards, Chm. St. Ltg. Com.
Virginia.....	Emporia.....	July 23.....	Furn. 50 H.P. gasoline engine, single acting triplex pump, 750 gals., to work against 130 lbs pressure.....	J. R. Grizzard, Town Clerk.
Oklahoma.....	Fairview.....	July 24.....	Furn. 45 and 60 kw. l. c. generator and excitor, 400 gal. per min., single acting and 300 gal. double acting triplex pumps; two 100 H.P. gas producer units on foundations in place.....	C. E. Dunham, Town Clerk.
Indiana.....	Laporte.....	July 26.....	Electric wiring, etc., Co. Court House, jail and Sheriff's residence.....	Laporte County Auditor.
New York.....	New York.....	July 27, 11 A.M.....	Electric equipment in school buildings.....	C. B. J. Snyder, Supt. School Bldgs.
Ohio.....	Gallipolis.....	July 30.....	Electrical equipment, Ohio Hospital for Epileptics.....	Wm. H. Pritchard, M.D., Sec. Hos. Bd.
Montana.....	Townsend.....	August 1.....	Bldg. 600 h.p. electric plant on Deep Creek for lighting city and operating mines; cost, \$85,000.....	C. Hebrinch, Helena, Eng'r.
Pennsylvania...	Pottstown.....	August 1.....	Lighting sts. by gas or electricity, 3 or 5 yrs.; now using 96 incan. lights, 32 cp. each; 80 arc lights, 1,200 cp. each.....	C. H. Breidenbach, Chm. Prop. Com.
Ontario.....	Hamilton.....	August 3.....	Bldg. plant to light city with elec. supplied by Hy. Elec. Power Com.; 700 arc lamps and complete equipment, cost, \$200,000.....	City of Hamilton.
New Jersey....	Cranford.....	August 5, 8 P.M.....	Street lighting in the township.....	James E. Warner, Township Clerk.
New York.....	Saratoga.....	August 7, 3:30 P.M....	Furn. gas, arc., incandescent or other lights for streets and public buildings for 4 year term.....	Philip S. Wakeley, Village Clerk.
Wisconsin.....	Green Bay.....	September 23.....	Gas and electric fixtures, etc., new Co. Court House.....	Elmer S. Hall, Clk., Brown Co.
Miscellaneous				
Illinois.....	Chicago.....	July 23, 11 A.M.....	Removing Drake fountain to another location.....	Department of Public Works.
New York.....	New York.....	July 23, noon.....	Final disposition of all ashes, street sweepings, etc.....	Foster, Crowell, Com'r. t. Cleaning.
New York.....	New York.....	July 23, 3 P.M.....	Furn. and delivering 10,000 ft. water hose for Park Dept.; also for two 3 H.P. mounted spraying outfits.....	Henry Smith, Pres. Park Board.
Ohio.....	Sandusky.....	July 24.....	Boilers, feed pump and pumping machine, Sold. & Sail. Home.....	J. L. Cameron, Sec. S. & S. Home.
Ohio.....	Cleveland.....	July 25, noon.....	Furn. and installing telephone switchboard.....	Wm. H. Ney, Sec'y Fire Dept.
Ohio.....	New Philadelphia.....	July 25, 1 P.M.....	Repairs to levee, bldg. 2 retaining walls, 11 culverts, etc.....	C. J. Knisely, County Eng.
California.....	Oakland.....	July 29, 10 A.M.....	Sweeping and cleaning paved sts., with machinery for year.....	W. B. Fawcett, Sec'y Bd. Pub. Wk.
New York.....	New York.....	July 30, 3 P.M.....	Labor and material for approach work, exterior N. Y. Public Library.....	Henry Smith, Pres. Park Board.
New York.....	Rensselaer.....	July 30.....	Furnishing fire apparatus, etc.; delivery in 90 days.....	Board of Fire Commissioners.
Pennsylvania...	Scranton.....	July 31, 2 P.M.....	Constructing an incinerating plant for garbage and rubbish, inc. bldg., equipment and appliances.....	J. Benj. Dimmick, Mayor.
Saskatchewan...	Prince Albert.....	July 31.....	Furn. 4-wheel double-cylinder; also hand-haul chem. engines.....	C. O. Davidson, Sec'y Treas.
Pennsylvania...	Philadelphia.....	August 1, 11 A.M.....	Constructing pier at navy yard for Navy Dept., Wash. D. C.....	Commanding Officer, Navy Yard.
Pennsylvania...	Scranton.....	August 6.....	Furn. 3,000 ft. or more of fire hose; new specifications.....	F. L. Wormser, Dir. Pub. Safety.
California.....	San Francisco...	August 6.....	Plans, etc., for wharf and dock.....	Sec'y Thorpe, of Harbor Com.

STREET IMPROVEMENTS

Huntsville, Ala.—Chas. W. Thatcher is interested in project to improve the roads through this section.

Little Rock, Ark.—The paving of South Main street is now being considered.

Los Angeles, Cal.—Council is taking steps to pave a number of streets including Georgia, Valencia, Albany and Eleventh streets, and Union avenue.

Redwood, Cal.—The Board of Town Trustees has adopted specifications for gravel walks for those portions of town where permitted and the Clerk will receive bids.

Riverside, Cal.—Council has adopted a resolution for construction of cement sidewalks along each side of Mulberry street, including intersecting streets, from the southerly line of First street to the northerly line of Eighth street.

San Diego, Cal.—Council has taken steps for the paving of D street from Fourth street to the water front.—Mayor Forward may be addressed.

San Francisco, Cal.—The repaving of Montgomery street is being considered by the Supervisors' Street Committee.

Plans are under way for a new boulevard to encircle the whole city; members of the Ingleside Improvement Club are interested.

Denver, Col.—A magnificent new drive 20 miles long is proposed for this city.—Address the Mayor or City Clerk.

Lakeland, Fla.—The sum of \$5,000 for paving and improving streets is provided for in \$40,000 bond issue to be voted on at an early date, when a Board of Public Works will also be elected.

Pensacola, Fla.—The question of bonding the county of Escambia to the amount of \$200,000 or more for constructing a system of roads connecting this county with Baldwin County, Ala., is now being discussed; the County Commissioners are in favor of the proposed improvements.

Lake Forest, Ill.—City Council has passed an ordinance for grading, draining and paving with macadam sundry streets.—Jas. F. King, City Clerk.

Rock Falls, Ill.—Specifications have been prepared for paving with brick a portion of First avenue.

Rockford, Ill.—The paving of State and Main streets is contemplated.

Waukegan, Ill.—The paving of Clayton and Madison streets is contemplated.

Anderson, Ind.—The petition for paving Pendleton pike for three miles will shortly be presented to the Board of County Commissioners; the cost of the work will be \$50,000.

Muncie, Ind.—More than \$75,000 is to be expended in improvements to be made to roads in this county.—Address County Commissioners.

New Albany, Ind.—The Board of Public Works has decided to improve East Tenth street by paving same with vitrified brick pavement.

The Board of Public Works has appropriated \$20,000 for street improvements.

Colfax, Ind.—A number of the streets in this town are to be paved.

Salina, Kan.—It is probable that the work of paving Santa Fe avenue will be done this year.

Leavenworth, Kan.—The matter of paving Waquoit street between Main and Fifth streets with brick is being considered.

Louisville, Ky.—The Fiscal Court has decided to pave Cecil avenue, from the city limits to the State Fair grounds.

The Board of Public Works ordered the construction of Burnett avenue from Floyd to Preston streets and of Clark street from Maple to Howard streets. Contracts for the two pieces of work will be let shortly. Estimates of the outlay place the figures at between \$8,000 and \$9,000.

The Board has about one hundred other pieces of sidewalk work under contemplation where the sidewalks have worn out, and favors granitoid instead of brick.

New Orleans, La.—An ordinance for paving with asphalt of Plum street from Carrollton avenue to Dante street is being considered by Council.

Saco, Me.—The business men are agitating the matter of securing better pavement for Main street and Pepperell Square.

Baltimore, Md.—At a recent conference between Mayor Mahool, City Engineer Fendall and others, the question of a new boulevard from Druid Hill Park to Forest Park was discussed.

Forest Park, Md.—A new road is planned from Liberty road from Brown's Hill to Forest Park; Mayor Shirley is interested.

Great Barrington, Mass.—The committee in charge of selecting the kind of paving to be used on Main street has decided on sand or shale block; the contract for the work will be let at an early date.

Lawrence, Mass.—Frank Malorey of North Chelmsford is furnishing 5,000,000 paving blocks for the big paving job that is now under way at this place.

North Adams, Mass.—The contract for the new State road to be built by the State Highway Commissioners on Orchard street is to be awarded in Boston; the contract calls for a mile and a third of road building and is from a point near the watering tub on Orchard street to the Cheshire line, near Dry Brook reservoir; work will be started as soon as contract is awarded.

Worcester, Mass.—At the recent meeting of the joint standing Committee on Streets the matter of paving Park avenue from Highland street to Haywood street was discussed; it was also voted to recommend to Council the macadamizing of Main street from Gates lane to Ludlow street.

Grand Rapids, Mich.—A meeting is to be held here July 22 and 23 for considering improvements to roads in this section.

Marshall, Mich.—Hereafter, instead of spending \$8,000 every year for keeping the dirt roads in this city in repair, Council will put \$6,000 into macadam road or brick pavement, giving the city permanent roads.

Excelsior Springs, Mo.—A petition has been presented to Council asking for the paving of Summit street from the east line of Haynes street to the west line of Salem road.

Omaha, Neb.—At a recent meeting of the Park Board, the question of new boulevard from Central boulevard through the Creigh-

ton tract to 32d street, to be known as the North Central boulevard, was discussed.

Portsmouth, N. H.—\$5,000 has been set aside for the extension of the State boulevard from Hampton Beach, via Big and Little Boar's Head.

Bayonne, N. J.—Council has passed ordinance to lay brick pavement on 48th street from Avenues C to E; grade West 30th street from Avenue A to Newark bay, and to construct sewer and water line in Grove place.—Pierre P. Garven, Mayor; W. C. Hamilton, City Clerk.

Hoboken, N. J.—The paving of Ferry street in this city is now practically assured.—Mayor Stein may be addressed.

Newton, N. J.—The Sussex freeholders recently passed resolutions favoring the construction of about 36 miles of macadam roads throughout the county.

Plainfield, N. J.—Council held a public hearing on the proposed ordinance which authorizes the macadamizing of certain streets and adopted it on third reading.

Albany, N. Y.—Secretary Wachsmann of the Board of Contract and Supply has been directed to advertise for bids for the paving of DeWitt street from Broadway to Montgomery street; Washington avenue, from Lexington avenue to a point 193 feet east, and for a pipe sewer in Myrtle avenue from Partridge street westerly.

Mayor Gaus has approved ordinance for paving Orange street.

Buffalo, N. Y.—Plans are being prepared for improving Hamburg turnpike, and a new boulevard is planned between Lake View and North Evans.

Arrangements will soon be made for extending Elmwood avenue.—Address Council.

College Point, N. Y.—Residents of First avenue have complained about the bad condition of the asphalt on that thoroughfare and it is probable that action in the matter will be taken shortly.

Dunkirk, N. Y.—Council has declared its intention of paving Lion street from Seventh street to the Nickel Plate Railroad; the work will probably be done during the present year.

Jamaica, N. Y.—Flushing avenue, in the vicinity of the Jamaica Training School, is to be improved with granite blocks; bids for same will shortly be opened.—Borough President Gresser may be addressed.

Little Falls, N. Y.—The matter of paving John street is being considered by Council.

Mohawk, N. Y.—The question of paving the business streets is being considered by the Town Board.

Troy, N. Y.—The Public Works Committee has reported in favor of the following street improvements, the report being adopted by Council: Construction of sewer from Eighth to Ninth avenues between Twelfth and Mechanic and Howard streets; construction of crosswalk at Erie and Howard streets; grading of Eleventh street from Eighth avenue easterly to the lands of the Boston and Maine Railroad; directing owners of property from 709 Grand street to 800 Grand street to relay sidewalks.

Cincinnati, O.—Council has passed a resolution for paving with brick the roadway of First alley from Vine street to Hamer street;

also for paving the roadway of Smith court from Smith street to its western terminus with brick.

Hanoverton, O.—A special election will be held August 8 to vote on issue of \$2,000 bonds for improving one of the village streets by paving a 14-foot width from the canal bridge at First street west along the canal road to the corporation line.

Liverpool, O.—The repaving of Eighteenth street from Commerce street to Clark avenue is being considered by Council.

Mansfield, O.—An ordinance has been passed by the Council directing the issue and sale of \$2,100 worth of city bonds to pay the cost of constructing flagstone walks in front of the several school houses; the B. P. S. was directed to enter into a contract for the paving of Lexington avenue; cost not to exceed \$4,000.

Middletown, O.—The Board of Public Service has instructed the Clerk to advertise for bids for the construction of sidewalks, curbs and gutters on six streets.

Norwood, O.—Solicitor Dwyer, acting under instructions from Council, will prepare resolution to improve Cleneay avenue with brick and macadam.

Sandusky, O.—Joseph Loth, City Auditor, will receive bids August 10 for the purchase of \$8,000 Washington street paving bonds; bear interest at the rate of 4 per cent., payable semi-annually.

Wellsville, O.—A resolution declaring it necessary to improve Wells avenue by paving has been passed, and the Board of Public Service has been instructed to get estimates for the repaving of Eighteenth street with old brick and also with new bricks.

Youngstown, O.—Wm. I. Davies, City Auditor, will receive bids August 3 for the purchase of the following bonds: \$5,100 sidewalk bonds, \$41,000 improvement bonds, \$2,945 sewer bonds, \$1,050 grading bonds, \$2,300 sewer bonds; said bonds to bear interest at the rate of 5 per cent. per annum, payable semi-annually.

Bonds, \$78,000, are to be issued for improvements to roads in Mahoning County; work will begin very soon.

Zanesville, O.—Estimates are being prepared for paving and curbing certain portions of Harrison street.

Ardmore, Okla.—Council will ask for bids for paving about twenty miles of street with Ardmore rock asphalt.—Address Mayor.

Enid, Okla.—Property owners on East Broadway are circulating a petition, which will shortly be presented to Council, asking for the paving of that thoroughfare.

Oklahoma City, Okla.—More than \$600,000 will be expended for paving streets of Oklahoma City; work now is in progress on Sharrel, from Eleventh to Thirteenth; Eleventh from Dewey to Sharrel; Columbus, from Walker to Harvey.

Canonsburg, Pa.—The Town Council has decided to have Ridge avenue paved at once; residents of Central avenue ask that the proposed sidewalks pavement be relaid 18 inches from the new curb, so as to allow for a small grass plot and room for trees and wire poles.—J. M. Farmer, Borough Engineer.

Du Bois, Pa.—Council has passed ordinance providing for the improvement of West Du Bois avenue for about four squares; other streets to be paved are East and West Scribner avenue; Council wants the work done this season if possible, and it is probable bids will be asked for as soon as the legal time for advertising is reached.

Duquesne, Pa.—A petition praying for the grading of Viola avenue between South First and South Second streets was referred to the Street Committee and Borough Engineer with power to act; a petition for a sidewalk on North Fifth street from Grant avenue north was received and filed. The ordinance for a sewer in Seventh street was given final reading and passed Council. The ordinance for the grading, paving and curbing of Library place was given first reading.

Ellwood City, Pa.—Council has been presented with an ordinance for paving of Sixth street and Second avenue.

Erie, Pa.—Select Council President Mehler has passed the following street and sewer improvement ordinances on first and second readings: Paving Cascade, Fourth to Eighth street; paving Eighth, Parade to East avenue; fixing width of walks at 8 feet on Eleventh, State to Parade street; curbing Twenty-first, Cascade to Plum; Brown's avenue, Cherry to Cascade; Liberty, Eighteenth to Twenty-sixth; sewer in Twenty-fifth street, Wayne west 300 feet; fixing width of walks Park avenue North and South; fixing width of walks on Eighth street, Cranberry to Weschler avenue; Paving Second street, State to Sassafras; sewer in Warfel avenue, Buffalo road south; sewer in Twenty-first street, Warfel avenue east; paving Eleventh street, East avenue to Pennsylvania avenue; establishing grade of Cascade street, Eighteenth to Twenty-sixth street; establishing grade of Lake road, Pennsylvania to Hess

avenue; paving Chestnut, Seventeenth to Huron; Huron, Chestnut to Cherry; Hickory, Eighteenth to Sixteenth; Sixteenth, Chestnut to Cherry; Walnut, Eighteenth to Huron; Cherry, Eighteenth to Sixteenth.

The following ordinances were passed on third reading and now go to the Common Council: Grading, draining and curbing Cochran street, Twenty-sixth to Thirtieth; grading, draining and curbing Twenty-ninth street, Peach to Chestnut; grading, draining and curbing Scott street, Myrtle to Twenty-ninth; grading, draining and curbing Twenty-third street, Peach to Chestnut.

The Select Council also adopted the following new resolutions: Directing the laying of concrete walks on Tenth street, eastwardly to East avenue, where not already laid; directing the Park Commissioners to proceed with grading of Lakeside Park, Sassafras to Myrtle street, and authorizing them to employ men by the day; requesting data for ordinance for paving Myrtle street, Eighteenth to Twenty-sixth, and requesting data for ordinance for curbing Twenty-fifth street, each to Myrtle.

Greensburg, Pa.—Plans are under way to extend the paving of Mt. Pleasant street, Eighth Ward, southward to the borough line, near the Keystone Coal Company's tipple, the work to be done by the Borough of Greensburg; South Greensburg will extend the paving of Broad street northward almost to the tipple, and the intervening space of about 200 feet located in Hempfield township, will, it is understood, be paved by the coal company.

Hempstead, Pa.—Sealed bids will be received August 3, 7:30 p. m., by the Clerk of the Borough, for the sale of 125 \$1,000 street improvement bonds, bearing interest at the rate of 4½ per cent. per annum, and dated August 1, 1908, and running for thirty years.—Andrew Hill, Clerk.

Nanticoke, Pa.—Within three days the Nanticoke Council arranged for a \$60,000 bond issue for street and sewer improvements, the Nanticoke School Board decided on a \$12,000 bond issue and the Nanticoke Hospital Association awarded the contract for a \$70,000 hospital building.

Washington, Pa.—A petition has been presented by the residents of Canton Township asking for a new public road through this section.

Orangeburg, S. C.—Steps will be taken at once for the paving of Main street from the Southern road to Brighton street, thence to the Coast Line depot.

Nashville, Tenn.—August 6, the date of the general election, has been named as a date upon which the people of Nashville shall vote on the issuance of \$50,000 of sidewalk and curbing construction bonds; Mayor Brown has given formal notice of this special election to the County Election Commissioners.

Park City, Tenn.—Park City will vote August 4 on \$105,000 issue of bonds, distributed as follows: Streets, \$55,000; schools, \$20,000; Fire Department, \$9,000, and sewers, \$21,000.

Rogersville, Tenn.—Contracts are being awarded for the grading of 80 to 92 miles of road and the macadamizing of 20 miles.—Address J. P. Sanders, Secretary of the Pike Commissioners of Hawkins County.

Austin, Tex.—Bonds, \$300,000, have been voted for the construction of county bridge and roads.—Address County Auditor.

Calvert, Tex.—Arrangements are being made for improving the roads in this town and vicinity.

El Paso, Tex.—A storm sewer is needed between the two railroads along by the St. Regis Hotel, and it is probable that action will be taken to compel the railroads to put one in.

Alexandria, Va.—Council has decided to pave Columbus street with brick.—Address Mayor F. G. Paff.

Lebanon, Va.—Contracts are to be awarded for fourteen miles of roadway to be constructed in Russell County after plans now on file with the Clerk of this town or State Highway Commissioners; \$100,000 has been appropriated.

Richmond, Va.—J. Taylor Stratton, Clerk Committee on Streets, states that it is proposed to pave Main street, between Seventh and Twelfth streets, with Belgian blocks or granite spalls.

Wheeling, W. Va.—An order for 40,000 paving brick has been issued by the Board of Public Works for the purpose of repairing South Chapline from Thirtieth to Thirty-first streets, and McColloch street.

A petition will shortly be presented to the Board of Public Works, asking for the repaving of Market street, between Thirteenth and Fifteenth streets.

A new boulevard from this city to West Liberty is planned by the Board of Highway Commissioners, to be built immediately.

Superior, Wis.—Council is considering the paving of Hammond avenue and Third street and Grand avenue.

SEWERAGE

Carmel, Cal.—The city has voted \$25,000 bonds for constructing sewer system.

El Centro, Cal.—Olmsted & Gillean, Engineers, Los Angeles, are preparing plans for sewer system, to cost about \$45,000.

Redwood City, Cal.—The Board of Town Trustees has adopted specifications for sewer pipe, and Clerk ordered to advertise for carload of same.

San Diego, Cal.—Superintendent McInnis expects to start upon the construction of the La Jolla sewers, and this work will be done under the direction of the city sewer superintendent.—E. H. Meyer, Village Clerk.

Beardstown, Ill.—The city is considering constructing levee and ditch to cost \$52,000; enlargement of sewer system at a cost of \$56,000 is also under consideration.

Belleville, Ill.—Council has passed ordinances for sewerage Glass avenue and for paving Gold street with vitrified brick; estimated cost, \$12,500.—Frederick Deutschman, Jr., City Engineer.

Freeport, Ill.—At a recent meeting of Council J. B. Fuller, Trustee, asked for permission to construct a sewer through Garfield street, to connect with the public sewer on High street.

Lewistown, Ill.—The city may secure engineers to prepare estimates of cost for installing sewers.—E. W. Duvall, Mayor.

Lincoln, Ill.—The Board of Local Improvements has decided to construct three sewers, one of which will be 4,180 feet long.

Macomb, Ill.—An ordinance has been passed for the construction of the proposed Mechanic street sewer to extend from the intersection of Piper and Mechanic streets to Calhoun street.

Marseilles, Ill.—The city has voted down proposition to install sewers for business section.

Rock Island, Ill.—Council has appropriated \$2,000 for Sixth Ward sewer system, \$5,000 for the Seventh Ward system, \$1,200 for sewer district No. 1 of the southwest storm drain, and \$12,197 for the No. 2 system.

Boonville, Ind.—The city is to construct 5 foot concrete and brick sewer, to cost about \$60,000.

Evansville, Ind.—Work has begun on the Newman sewer by the Board of Public Works.

Indianapolis, Ind.—C. A. Brown, Engineer in charge of the city's sewers, will shortly have plans completed for a big sanitary sewer to drain Brightwood.

The Board of Public Works will shortly receive plans for the construction of another big sewer, to be known as the St. Paul street sewer.—Elaine H. Miller, City Engineer.

Lawrenceville, Ind.—The Board of Improvement has let the contract for surveying for a sanitary sewerage system to Courier & Harvey of Mt. Carmel; this proposed sewer system will cost in the neighborhood of \$25,000.

Shelbyville, Ind.—Council has let the contract for the drawing of plans and will soon ask for bids for the construction of a sewer system; estimated cost, \$150,000.

South Peru, Ind.—All proposals received for the construction of a sewer were rejected and new bids will be asked.—George F. Merley, Town Clerk.

Atchison, Kan.—In case the North Atchison sewer proposition is defeated, it is proposed to organize a new sewer district and take in only those property owners in favor of the proposed sewer.

Lexington, Ky.—The Joint Improvement Committee has recommended ordinances for the construction of new sewers, as follows: Jefferson, from Fourth to Sixth street; Fourth, from near Walnut, to connect with Ohio street sewer; in Fayette Park, to connect with the Fifth street sewer; on Fifth, from Broadway to Jefferson.

Ordinance has been adopted by Council for construction of a public sanitary sewer on Woodland avenue, from intersection of Woodland and Center avenues north.

Salem, Ky.—Town Board is reported to be considering constructing sewer system.

Detroit, Mich.—Council has directed the Department of Public Works to advertise for proposals for construction of six lateral sewers.—J. J. Haarer, Commissioner.

Ishpeming, Mich.—City Engineer Barabee has completed plans and specifications for sewers for the Sixth Ward. The work will require 10,882 feet of pipe, including 712 feet of 18-inch, 232 feet of 15-inch, 2,197 feet of 12-inch, 2,030 feet of 10-inch, 13,522 feet of 8-inch, also 23 manholes, nine flush tanks and 58 catch basins.

Ely, Minn.—Council will receive bids shortly for the construction of several blocks of sewers.

St. Paul, Minn.—Board of Public Works proposes to construct a sewer on Rose street, between Mendota and Forest streets, Jessamine street. Sewers have been ordered constructed on Bay street and in Osceola avenue.

Meridian, Miss.—The city is to at once construct a sewer to the north part of the city limits for the Masonic home; estimated cost, \$5,000.

Liberty, Mo.—Plans are being prepared for sewers to be constructed at a cost of \$15,000. —C. S. Murray, Mayor.

Lincoln, Neb.—Ordinances have passed Council for the construction of sewers in Peoria street and Hamilton street.

Camden, N. J.—Council has passed an ordinance for the construction of sewers or drains along Carman street, from Bank street to Marlton avenue, and Twenty-eighth street, from Federal street to Carman street.

Paterson, N. J.—Plans are under way for a new sewage disposal plant.—Mayor McBride can be addressed.

Plainfield, N. J.—Whether North Plainfield will have a separate sewer system or join with the communities in that part of the State in the creation of a joint trunk sewer system is the question now being considered.

Red Bank, N. J.—A plan is under way to construct sewers in Prospect avenue, Throckmorton avenue, and in the eastern end of Mechanic street; the work will probably be started some time next month.

Trenton, N. J.—Council has adopted an ordinance for the construction of a drain or sewer in Hermitage avenue.

Councilman Christopher has introduced an ordinance for the construction of a sewer on Clinton avenue, from Hamilton avenue to Liberty street.

The Mayor has approved the ordinances for sewer 408, in Princeton avenue, and for the grading Tyler street, between Monmouth and Chambers streets; also the contracts for the construction of a flushing basin for sewer 389, in Hamilton and Fairview avenues and Liberty street, for drain 67, in Gold Run, and for Drain 68, in Furman street.

Westfield, N. J.—Council has passed on its first reading an ordinance for the construction of sewers on the Cranford side of the borough, and has passed its first reading for the extension of the sewer in Kimball street.

Binghamton, N. Y.—A special election has been called to vote on a bond issue of \$25,000 for constructing a system of storm water sewers on Main and Clinton streets.

John A. Giles, City Engineer, has completed plans for sewers in Spring street, Forest avenue and Spruce street, and bids will be called for at once by D. C. Herrick, Clerk Board of Contract and Supply.

Buffalo, N. Y.—The Committee on Sewers has voted to turn down Sloan's request for the use of the city's sewer system.

Geneva, N. Y.—The proposition to vote \$1,053 for the construction of sewers in the town has carried; the sewers are to be constructed on Evans and Mason streets and on Avenue A.

Gloversville, N. Y.—A public hearing will shortly be given on the proposition to construct sewers on Center street, North Kingsboro avenue and Baker street.

Gouverneur, N. Y.—The matter of constructing a modern sewer system for this town is being considered.

Niagara Falls, N. Y.—City Engineer W. D. Robbins is preparing plans for sewers in Portage road, from Cedar to Fort avenue, from Falls street to Mackenna avenue, and from N. Y. C. and H. R. R. R. to Buffalo avenue, requiring 1,140 feet 15-inch, 938 feet 12-inch and 1,575 feet 10-inch tile, 12 manholes, 12 catchbasins and 3,000 cubic yards rock excavation. Engineer's estimate, \$13,710.45; bids will be called for by Board of Public Works.

North Tonawanda, N. Y.—A proposition to raise \$35,000 by special taxation for an extension of the sewer system in the Ironton and Pinewood district has been carried by a special election.

Rochester, N. Y.—City Engineer E. A. Fisher is preparing plans for sewers in sundry streets; bids will be called for by F. X. Pifer, Secretary Board of Contract and Supply.

Rockville Centre, L. I., N. Y.—The Village Trustees have under consideration a proposition looking forward toward the installation of a sewerage system and disposal plant. It is proposed to lay about fourteen miles of pipe, which it is estimated will cost \$3,000 per mile.

Schenectady, N. Y.—Mayor Van Voast is interested in the establishment of a new sewage disposal plant.

Syracuse, N. Y.—The City Engineer is preparing plans for a 15-inch pipe sewer in Third North street, from Craig street to a point 300 feet west of Pond street; also for an 18-inch sewer in Pond street, from Third North to Becker street, and an 18-inch sewer in Becker street, from Pond to Craig street; bids will be called for by George J. Metz, Clerk

of the City Board of Contract and Supply.

Utica, N. Y.—Council will take action at once in the matter of the Eagle and Hodge street sewer.

Akron, O.—The Board of Public Service has approved the plans and specifications for the sewer in Spicer avenue, Miami and South streets.

Ashtabula, O.—The residents of Sibley street have asked Council for permission to connect with the storm sewer which is now being built on that street.

Bellaire, O.—The Board of Health is considering the matter of constructing a garbage disposal plant.

Chillicothe, O.—A petition has been presented to Council asking for a sanitary sewer on Eighth street, between Mulberry and Plain streets; the property owners also asked that city water should be given there.

Cincinnati, O.—Sewer Engineer Seifert, of the City Engineer's office, has proposed to the Board of Public Service that as a health measure a more complete plan of sewerage be arranged for the Western portion of Price Hill; he stated that it would be necessary for the city to acquire ground in a ravine west of Academy street, between Eighth and Delhi streets, for the construction of a storm and sanitary sewer outlet; he also suggested that the main pipes be enlarged.

Dayton, O.—City Engineer Cellarius has completed plans and has been instructed to ask for bids for following sewers: Storm water sewer in Weaver avenue, \$3,100; in River street, \$4,400; in Kiefer street, \$900; in Burkhardt avenue, \$2,887; in Ludlow and Buren streets, and Warren street, from Toy to Alaska.

Galion, O.—Civil Engineer Bradbury has presented plans and profiles for the sanitary sewer and disposal plant.

Greenville, O.—Engineer Jackson has been authorized to receive bids for a sanitary sewer extension on North Broadway and South Central avenues and a storm water sewer on Euclid avenue.

Mansfield, O.—The matter of constructing a new 12-inch water main through the manufacturing district has again been presented to Council; the matter was referred to the Department of Public Service for investigation; a resolution has been adopted by Council for the construction of a new storm sewer, extending east from Hammond avenue; the cost of the work is not to exceed \$750.

Middleton, O.—The Engineers' plans for a sewer on Young street have been submitted to Council with a recommendation that they be adopted.

Oxford, O.—The citizens have voted \$50,000 bonds for sewer purposes.

Springfield, O.—City Engineer M. J. Bahin will shortly submit report of the cost of constructing the proposed storm drain in the southern section of the city to Council.

Waverly, O.—Clerk Bell, of the village, has been instructed by the Department Public Service to advertise for bids for the extension of a sewer in this city, about 200 feet, according to plans approved by the State Commissioner of Health.

Youngstown, O.—Council has adopted a resolution for the construction of a sewer in Homer avenue, from city limits to Hillman street, and Ina avenue, from Edwards street to city limits.

Purcell, Okla.—The city has voted \$62,000 bonds for constructing a sewer system and for other improvements.—M. S. Robertson, City Clerk.

Sulphur, Okla.—A special election is to be held to vote on issuing \$7,500 bonds for extension of sewer system and \$25,000 of bonds for extension of water works.

Tonkawa, Okla.—The matter of constructing a sewer system is being agitated.

Beaver, Pa.—On motion of Mullen & Miller the Sewer Committee was instructed to proceed to put down a sewer on Fourth street, providing the street is to be paved, which now seems assured. A petition for sewerage on Sarah street was received and referred to the Sewer Committee.

Butler, Pa.—The resolution of Council, under which the contract for engineering work in connection with the proposed sewage disposal plant was awarded to Engineer Ross, has been given to the Mayor for his action, and he has not yet taken the matter up.

Canonsburg, Pa.—It was reported by Engineer Farmer to the Town Council that two flush tanks, which belong to the borough, were not in use and might be sold; Street Commissioner D. C. Wilson was instructed to dispose of the tanks.

Chester, Pa.—Dr. Samuel G. Dixon, Commissioner of Health, has notified the city officials that they cannot extend their sewer system into the Delaware River and its tributaries. In the present conditions, and according to Dr. Dixon, the city officials will have to remedy the evil, and to do this it will be necessary to borrow over \$575,000 for a new system.

Erie, Pa.—The City Engineer reports that the flooding at the west branch of Garrison

Run can be stopped by building sewers to Millcreek at a cost of \$900 and \$4,300; the communication was referred to the Common branch.

Greensburg, Pa.—Contracts will soon be awarded for new sewage purification plant for the Borough of Derry.—J. M. Nicholson, Borough Clerk, Derry; Robert G. Gill, Engineer, Greenburg.

Harrisburg, Pa.—The Mayor has signed the ordinance providing for the construction of a sewer on Logan street, from Woodbine street to Maclay street.

Lancaster, Pa.—This city is to be compelled to spend probably \$750,000 in the construction of a complete sewer system to comply with the demands of State Health Commissioner Dixon; three disposal plants will have to be built.

Lewisburg, Pa.—Borough has sold \$20,000 of bonds, part of proceeds of which will be used for extending sewer system.

Millville, Pa.—Plans will shortly be prepared for the erection of a sewage disposal plant, to cost \$20,000.

Punxsutawney, Pa.—The Town Council has made application for a permit to the State Board of Health to build a sewer that will arrest the surface water that comes off the hills of North Punxsutawney, and carry it down to a point near the junction of Mahoning Creek and Sawmill Run, West End, and by so doing prevent the clogging of the sewers in the main part of town. A special committee of the Council, composed of W. H. Heckendorf, Irvin Simpson and Dr. G. W. Means, with the assistance of Borough Engineer Coulter, have been making investigations and preparing estimates on the cost of a storm and sanitary sewer, the results of which were submitted to the Council Monday night in the shape of a report, which was accompanied by a blue print of the plan.

Scranton, Pa.—The matter of paving Elm street is being considered.

West Chester, Pa.—A new sewer system with filtration beds and disposal plants is being discussed.

York, Pa.—A bond issue, amounting to \$400,000, will probably be voted this fall by the citizens to cover the cost of completion of sewer system and construction of sewage disposal plant.—Rudolph Hering and Geo. W. Fuller, 170 Broadway, New York City, Consulting Engineers.

Chattanooga, Tenn.—The plans for the cross-town sewer and pumping station for South Chattanooga, which are being prepared by City Engineer Robert Hooke, are ready to be submitted to the Board of Public Works.

Nashville, Tenn.—Council has appropriated \$500 to construct an extension to the sewer on Grove avenue.

Park City (P. O., Knoxville), Tenn.—Election may be held to vote on issuing \$100,000 of bonds, \$21,000 of which it is proposed to expend for sewers.

In the matter of connection with the Knoxville main sewer along First Creek, Mayor W. R. Johnson told Council of the conference held with Mayor John M. Brooks and John W. Flenniken, Chairman of the Board of Public Works of Knoxville, as well as several Aldermen, relating to connections with the sewer by Park City, and he believed that a suitable arrangement could be made.

Dalhart, Tex.—The city has voted bonds for the construction of a sewer system.

El Paso, Tex.—Consulting Engineers Rudolph Hering and George W. Fuller, 170 Broadway, New York City, have been commissioned to prepare plans for a sewage and garbage disposal plant for the city.

Houston, Tex.—Council has authorized the Mayor to advertise for bids for the construction of an 11-foot concrete storm sewer over Austin street, from Buffalo bayou to Preston avenue.

Salt Lake City, Utah.—A special election is to be held July 29 to vote on issuing \$600,000 bonds for improving water and sewer systems.

Spokane, Wash.—Residents of Thirteenth street, between Helena street and Pittsburg street, have petitioned for the construction of a sewer on that thoroughfare.

Lunenburg, N. S., Can.—The town will improve the water works and sewerage systems; estimated cost, \$25,000.

Mimico, Ont., Can.—It is proposed to install a sewerage system at the Mimico Industrial School; estimated cost, \$7,500.

WATER SUPPLY

Russellville, Ala.—The city has voted \$24,000 to be used in the construction of an electric light plant and water system.

Los Angeles, Cal.—After negotiations lasting a week, a New York syndicate's offer for the remaining \$20,000,000 worth of bonds of the Owens River water project issued by the City of Los Angeles has been accepted by the City Council, and the last financial obstacle to the completion of the city's \$23,000,000 plan for a new water supply was announced to have been surmounted.

Oroville, Cal.—The Oro Water, Light and Power Company is preparing to overhaul its distributing system.

Redwood City, Cal.—The Board of Town Trustees has passed declaration of intention to call for bond election to issue \$20,000 of bonds for water pipe, \$10,000 for extension of Phelps street and \$10,000 for new Town Hall and City Attorney Thorpe directed to prepare ordinance calling election.

Specifications for water pipe for Dingee Park were adopted and the Clerk ordered to advertise for bids.

San Jose, Cal.—A sum of \$5,000 has been given to the Santa Clara College by Mr. and Mrs. H. F. O'Connor of this place for the construction of a water system for the new college buildings and grounds, which are being constructed at Mountain View; the college will have four reservoirs, with a total capacity of \$1,100,000 gallons.

Fort Morgan, Col.—The election to issue \$55,000 bonds for the improvement and enlargement of the water works plant carried.

Wilmington, Del.—A loan ordinance has been introduced in Council for loan to be used to complete the new municipal water plant.

The patrons of the "Old Soldiers' Park," at Sixteenth and Market streets, have appointed a committee to wait upon the executive committee of the Board of Park Commissioners to urge upon that body the necessity of placing a water supply there.

Lakeland, Fla.—The amount of the proposed issue will be \$40,000, which will be used for public improvements, as follows: New school building and additions to the large brick building now in use, \$15,000; additions and extensions to water works system, \$15,000; paving and improving streets, \$5,000; additions and extensions to electric light plant, \$5,000; a Board of Public Works will also be elected at the election, who will direct the improvements and control the funds.

Leesburg, Fla.—Gilbert Hunter, Jacksonville, has applied for an electric light and water franchise in this town.

Coeur d'Alene, Ida.—Citizens have petitioned Council to take steps to purchase the present water plant or to build a plant to be controlled by the city.

Mattoon, Ill.—Superintendent Claude James has been directed to sink several test wells for securing improved water supply.—Address Municipal Water Works Commissioner.

Pekin, Ill.—Council is considering water works franchise; it has not been decided whether to renew the franchise of the Pekin Water Works Company or let a syndicate put in a new plant.

Knox, Ind.—The city has decided on the construction of a water works system, to cost about \$18,000; plans are being prepared by Geo. C. Morgan, Royal Insurance Building, Chicago, Ill.

Muncie, Ind.—The matter of changing the present water system is being considered by the Board of Public Works.

McCallsburg, Ia.—Council will sink deep well and build standpipe.

Sioux City, Ia.—City Engineer G. Y. Skeels is preparing plans for a standpipe 100 feet in height, with a capacity of 60,000 gallons, to be located in Morningside.

Wapello, Ia.—A committee of the Commercial Club is investigating a compressed air water system.

Beloit, Kan.—Council has passed ordinance for an issue of bonds to improve, repair, rebuild and extend the water works.—C. R. Herrick, City Clerk.

Newport, Ky.—A committee appointed by the Water Works Commissioners met with the Trustees of the District of Clifton to discuss the matter of supplying the district with water; the proposition has been under consideration for some time, but because of an injunction against the city furnishing adjacent municipalities with water nothing has been done; Superintendent W. L. Glazier recommends the erection of a standpipe at the reservoir in order to furnish adequate pressure on the hilltops; if water is to be obtained from Newport, it will be necessary for Clifton to lay its own pipes.

Plaquemine, La.—A meeting of the taxpayers of this town was recently held to discuss and arrange for a new water system.

East Brookfield, Mass.—The citizens have voted \$25,000 to construct a water supply system.—William S. Johnson, 101 Tremont street, Boston, Engineer.

Norway, Mich.—The town authorities have decided to secure a supply of water for the proposed new water works system, from Mud Lake, northwest of the city.

Winona, Minn.—Council has adopted plans for filter system.

Gulfport, Miss.—City Engineer M. F. Sullivan has prepared estimates for concrete reservoir; bids will be asked.—Address City Engineer.

Kansas City, Mo.—About \$25,000 will be expended in repairs at Quindaro and Turkeet Creek water stations.—W. G. Goodwin, Acting Chief Engineer of the Water Works.

Gothenburg, Neb.—C. A. Edwards, C.E., Kearney, is preparing plans and estimates for a water works plant for Gothenburg, to cost about \$25,000; bonds will be voted on soon.—C. L. Williams, City Clerk.

Sidney, Neb.—Bids will be received August 1 for the purchase of \$20,000 20-year 6 per cent. water bonds.—Leslie Dredick, Chairman.

Branchville, N. J.—The Borough Council has received a petition from a number of real estate owners asking that body to submit the question of constructing a system of water works to the voters of the borough.

North Arlington, N. J.—The North Arlington Common Council has decided to establish its own water supply works at a proposed cost of \$23,594.89 and adopted a resolution to at once advertise for bids for the material needed.

Trenton, N. J.—Measures have been taken to install a filtration plant that will cost \$1,000,000.

Verona, N. J.—At a special election July 28 the question of the construction of a plant for the supply of water and the issuance of \$55,000 bonds to meet the cost of the water system, will be voted on by the people.

Albany, N. Y.—Secretary Wachsman, of the Board of Contract and Supply, has been directed to advertise for cast-iron water pipe to be used in laying new mains on several of the principal streets; this pipe cannot be delivered before fall.

Canajoharie, N. Y.—A petition is being circulated asking that the Village Board submit a proposition to the people at a special election to construct a municipal water plant.

Cortland, N. Y.—Council has voted to buy the water works plant for \$300,000.

Lockport, N. Y.—Bids were received at the City Clerk's office for the \$35,000 in bonds to complete the water supply system, as follows: Otis & Hough, Cleveland, O., premium, 18.39 for 5 per cent. bonds; Fenwick & Roberson, New York, premium \$15 for 4 1/4 per cent. bonds; First National Bank, Cleveland, O., premium \$50 for 4.65 per cent. bonds; W. J. Hayes & Sons, Cleveland, O., premium \$70 for 4.30 per cent. bonds; Ferris & White, New York, premium \$60.50 for 4.35 per cent. bonds; W. N. Coler & Co., New York, premium \$82.95 for 4.30 per cent. bonds; Langley & Lawrence, New York, premium \$89.25 for 4.30 per cent. bonds; the bonds were awarded to Langley & Lawrence at the rate stated above.

Rensselaer, N. Y.—The Rensselaer Water Company will build its proposed new reservoir on the Dunn farm on Greenbush Heights; plans for the work are now under way.

Barberton, O.—The Village Council has decided to install water meters; estimated cost, \$12,000.—J. M. Royston, Secretary, Board of Public Affairs.

Engineer Alborn has submitted the estimated cost of \$890.33 for the construction of a 6-inch water main on South Second street, from Baird avenue to Wolfe, thence on Wolfe avenue to the Akron and Barberton Belt Railroad.

Canal Dover, O.—E. F. Wible, City Auditor, will receive bids July 31 for the purchase of 70 coupon bonds, aggregating \$35,000, to bear interest at the rate of 4 per cent. per annum, payable semi-annually, for erecting a municipal light and power plant.

East Liverpool, O.—Council has appropriated \$15,000 for installing a filtration system.

Lorain, O.—A special election will be held August 18 to vote on proposition to issue \$60,000 bonds for extending the intake of the water works.

Oroville, O.—An ordinance to issue \$9,000 bonds has been passed; the money will be used for improving the water works plant and extending the water works system.

Toledo, O.—Bids were rejected for the construction of an intake for the new filtration plant and new bids will be advertised for.—Reynold Voit, Secretary Board of Public Service.

Okemah, Okla.—The matter of issuing \$15,000 light and water bonds will be submitted to a vote of the people.

Avonmore, Pa.—Citizens of this town are planning to install a water works system and a large reservoir will be constructed on the hillside above the town.—Address Town Clerk.

Conway, Pa.—The citizens have voted \$20,000 bonds for water system.

Falls Creek, Pa.—The Industrial Development Company has been permitted to paint the borough water tank and place their sign upon it.

The matter of extending the water mains along streets where buildings may be erected and water wanted, was discussed, and Council showed a willing disposition to do anything reasonable to promote the best interests of the people's public affairs, so that there will be no trouble in securing water at the right time.—J. P. Casey, President.

Franklin, Pa.—N. W. Harris & Co. have decided to accept the issue of \$160,000 water

works bonds, as soon as the plant of the Venango Water Company is turned over.

Harrisburg, Pa.—The Water Supply Commission has rejected all bids for the dike at Matamoras and approved charter applications of the South Huntington, Pocono Knob and Bushkill Water Companies; the applications of the Rutherford Water Company, of Highspire, and the Citizens' Water Company, of Warren, were laid over.

The following ordinances were passed on second reading and finally by Common Council: Authorizing the Water Commissioners to lay a 6-inch water pipe in Crescent street, from Kittatinny to Berryhill street; an 8-inch water pipe in Schuylkill street, from Jefferson to Seventh street; a 10-inch water pipe in Penn street, from Maclay to Reilly street; an 8-inch water pipe in Herr street, from Fifteenth to Fourteenth street; the construction of a terra cotta pipe sewer in Briggs street, from Sixteenth to a point 90 feet west of Seventeenth street; an appropriation out of the sewer tappage fund to pay for the cost of constructing a sewer in Logan street, from Woodbine to Maclay street.

Kittanning, Pa.—Avonmore, on the Kiskiminetas River, is without fire protection, and the citizens are planning to install a water works and organize a fire department; a large reservoir will be constructed on the hillside above the town and several artesian wells will be drilled; fire plugs will be placed and young men of the town have signed their willingness to serve as volunteer firemen.

Lock Haven, Pa.—On motion of Mr. McClellan, the Water Committee has been given authority to contract for the unloading from the cars and delivery of water pipe along the streets where the main is to be laid.

On motion of Mr. Kreamer, the Water Committee was also instructed to procure the necessary valves and fire hydrants for the new line.

Monongahela, Pa.—The plant of the Monongahela Water Company, on Factory and Railroad streets, was recently wrecked; loss, about \$40,000.

Philadelphia, Pa.—Proposals for the entire work of laying water mains in the newly developed sections of West Philadelphia will be advertised for at once; it is proposed to lay about 12 miles of water mains.

Geddes, S. D.—An election will be held to decide the question of issuing \$5,000 water works bonds.

Vale, S. D.—H. M. Stearn will let contracts for drilling artesian well.

Lynchburg, Va.—The city contemplates laying water mains to supply the West End, water to be supplied from new gravity system.—G. W. Smith, Mayor.

Bellingham, Wash.—Preliminary work of building an auxiliary water system, including a filter plant, at the head of Whatcom Creek, will shortly be started.

South Park, Wash.—The South Park Improvement Club is agitating the question of securing the Cedar River water supply for the city; the Georgetown system is now in use, but the citizens are opposed to it.

Wheeling, W. Va.—The Water Board is considering estimates for additional pumping machinery, to be purchased for the city water works.

Cumberland, Wis.—The proposition to borrow \$25,000 from the State trust funds, a portion of which is to be used for extending the water system, carried.

Tomah, Wis.—Council will lay additional water mains and construct water tower.

LIGHTING AND ELECTRICITY

Columbia, Ala.—Charles H. Davis contemplates development of water power capable of furnishing 800 horsepower; only 500 horsepower equipment is to be installed at first.

Decatur, Ill.—The Decatur Light, Power and Fuel Company will make extensions to gas mains in Decatur and New Decatur; will also extend mains to West Decatur; cost several thousands of dollars.

Jonesville (Troy Post Office), Ala.—The Birmingham Railway, Light and Power Company, M. Sloan, Chief Engineer, Birmingham, Ala., has purchased a site in Jonesville on which it will erect a proposed power-house; cost, \$1,500,000.

Fort Morgan, Col.—Council will expend \$55,000 in improving light and water plant.

Augusta, Ga.—The Augusta-Aiken Railway and Electric Company will expend about \$25,000 for additional machinery, which will include a generator of about 350-horsepower, at the power-house in Augusta.—J. H. Adams, Electrical Engineer.

Marion, Ind.—An ordinance is before Council for an issue of \$50,000 bonds for improving electric light plant.—Frank Charles, City Attorney.

Lexington, Ky.—Mayor John Skain has signed the ordinance recently passed authorizing the sale of an electric light franchise; the sale will be made at an early date; the

franchise by the terms of the ordinance cannot be purchased for less than \$1,000; it is understood that local Louisville capitalists, represented by Colonel John R. Allen, are prospective buyers.

Morganfield, Ky.—The Morganfield Light and Power Company is planning to install a 100-kw., 550-volt, direct-current generator in the fall to furnish electricity for motor service, both alternating and direct current.—F. W. Gilbert, manager.

Buffalo, N. Y.—Commissioner of Public Works F. G. Ward has informed the Aldermen that the contract under which the Cata-tract Power and Conduit Company supplied power for the operation of electric pumps at the water works has expired; he recommends that action be taken to continue this supply at the old rate until a new contract is made; the city has been paying \$25 a horse-power a year for power.

Canal Dover, O.—The City Auditor is advertising for the sale of \$35,000 bonds for the erection of a municipal light and power plant.

Seattle, Wash.—The Superintendent of the Water and Light System has petitioned for \$288,000 for improving the city lighting system.—L. B. Young, Superintendent.

Campbellsport, Wis.—The Campbellsport Electric Light and Power Company has been incorporated with \$10,000 capital by John F. Sharp and others.

West Allis, Wis.—The West Allis Light and Power Company has petitioned for a franchise to establish a light and power plant.—Address F. C. Weld.

FIRE EQUIPMENT

Piedmont, Cal.—A site is soon to be purchased for a new fire house and new fire engine.—Address Chief of the Fire Department.

Los Angeles, Cal.—Council has appropriated funds for new fire engine house, to be erected at Normandie and Vernon avenues, to be modern in every detail.

Boulder, Cal.—Contracts have been awarded for two new fire stations, to be located at Fourth and Maxwell streets, and the other on University place.

Washington, D. C.—George B. Cortelyou, secretary of the Treasury Department, has directed that at least 1,200 feet of fire hose be purchased to replace a large amount of that on hand, adjudged to be inferior, and that a man be detailed to look after the fire equipment of the building and keep it in order.

The District Commissioners, with Major Richard Sylvester, Chief of Police, Acting Chief Wagner of the Fire Department, Electrical Engineer Allen and Messrs. Strauss and Minnick, of the Washington Terminal Company, have arranged for equipping the new Union station for fire and police protection.

Atlanta, Ga.—Council has issued \$100,000 bonds for new fire engine houses and new apparatus for the Fire Department.—Address Chief of the Fire Department.

St. Charles, Ill.—At a recent meeting of Council Fire Chief McWilliams asked for extension ladder, wagon and other apparatus for the Fire Department.

New Castle, Ind.—The County Commissioners are preparing to build a public hospital in the city on North Main street.

Cedar Rapids, Ia.—The erection of two new fire stations on the west side is being considered by Council.—Address Commissioner Keffler.

Annapolis, Md.—The city will soon vote on \$40,000 bonds for municipal improvements, \$30,000 of which is to be used for a new engine house for the Rescue Hose Company.—Address the Mayor.

Havre de Grace, Md.—Council will offer for sale \$30,000 fire and street improvement bonds.

Lauraville, Md.—A movement has been started for a new and modern engine house for the Lauraville volunteer fire company.—Address Fire Chief.

Fall River, Mass.—John L. Coughlin, Mayor, can be addressed for further information regarding new Fire Department building on Robeson street; to cost \$15,000.

Fairhaven, Mass.—A site on Middle street is proposed for a new engine house.

Lee, Mass.—A site has been purchased for new \$20,000 brick and stone two-story engine house for Fire Department; Thos. H. Hayden, Chief.

Marlboro, Mass.—An additional \$10,000 has been voted for new central fire and police station, to be erected at Main and Bolton streets, for which \$40,000 has already been appropriated.—Address Mayor.

Methuen, Mass.—A special town meeting was held recently to consider the purchase of new supply of fire hose for the west of town.

Detroit, Mich.—About \$200,000 is to be expended for new electric fire engines, to be purchased for the Fire Department.—Address Clerk of City Council.

Mt. Iron, Minn.—Architects F. L. Young &

Co., Duluth, are preparing plans for a fire hall.

South St. Paul, Minn.—All bids were rejected for the two-story brick fire hall.—J. J. O'Brien, City Recorder.

Virginia, Minn.—Council will purchase hook and ladder truck.

Galena, Mo.—Messrs. Foole, Horning and Carney recommend the purchase of 1,000 feet more of fire hose for the Fire Department.—Address Fire Chief Elliott.

Beatrice, Neb.—The City Fire Department recently held a meeting to discuss the erection of a new building, to be used for fire headquarters.

Omaha, Neb.—The City Clerk will soon advertise for bids for site for new fire engine house, to be erected north of Boyd street, between Florence boulevard and Twenty-seventh street.

Plainfield, N. J.—Site on East Side is to be secured for a new fire house; cost about \$10,000; work is to be commenced in the early fall.

Pleasantville, N. J.—The purchase of a new fire engine for this town is now being discussed; additional fire apparatus is badly needed.

Red Bank, N. J.—A petition has been presented to the Town Commissioners asking that a chemical engine be purchased for Fire Department at a cost of \$1,600.

West New York, N. J.—Proposals will be received by the Town Council for \$18,000 bonds for a new fire engine house.—James J. Wolfe, Town Clerk.

Poughkeepsie, N. Y.—Percival M. Lloyd has prepared plans for new fire house, to be erected on Academy street, for the Lady Washington Hose Company, to be three stories high, 36x60 feet in dimensions and brick and stone.

Alliance, O.—The appropriation ordinance contains an item of \$6,500 for fire apparatus; a resolution presented by the Fire Committee authorizing the Board of Public Safety to purchase a lot for a substation at a cost of \$1,200 has passed Council.—W. S. Aungst, Chief Fire Department.

Canton, O.—Two new temporary fire engine houses are to be erected for the Fire Department on the side of the City Hall.—Address Chief Mesnar.

Cincinnati, O.—A \$40,000 engine house is planned at Pearl and Martin streets.—Address Chief of Fire Department.

The Board of Public Safety has decided to erect a modern new fire engine house on Crescent avenue.

Cleveland Heights, O.—Architect George F. Hammond, Cleveland, has completed plans for a fire station for Cleveland Heights.—William Phare, Village Clerk.

Columbus, O.—Superintendent of Construction Burley of the Fire Department is working on plans for the No. 16 engine house, to be erected at Chestnut and Fourth streets, to be modern in every detail.

Gurnsey, O.—Council is considering appropriating funds for improvements to fire houses.—J. H. Opperman, President.

Springfield, O.—Bonds, \$20,000, are to be issued for the erection of a new fire engine house.

Wellsville, O.—A site has been secured for new fire station.—E. C. Taylor, Clerk, Board of Public Safety.

Zanesville, O.—Harry C. Meyer has prepared plans for new fire station in the Fourth Ward.

Sapulpa, Okla.—About \$10,000 is to be expended in equipping the Fire Department.

Johnstown, Pa.—The Independence Fire Company has petitioned for the purchase of fire truck and hose wagon.

Philadelphia, Pa.—W. Bleddyn Powell, City Hall, has prepared plans for a new two-story fire station to be erected at 2712 North Second street, to be 32x70 feet in dimensions, brick and stone, and erected at a cost estimated at about \$20,000.

Pittsburg, Pa.—Architect E. C. Stotz is preparing plans for a two-story fire engine house for the Board of Public Safety; cost, \$30,000.

Wilkinsburg (Pittsburg Post Office), Pa.—Competitive plans will be received until Aug. 1 by the Board of Education for constructing a fireproof brick and stone high school.

Providence, R. I.—Work has been commenced on addition to the engine house of the Edgewood Volunteer Fire Company on Pawtuxet avenue.

Knoxville, Tenn.—Council proposes to expend \$30,000 for the purchase of fire equipment; the following apparatus is required: Water tower, fire engine, two combination wagons, one chemical engine, 2,000 feet of hose, etc.—W. S. Nash, Chairman Fire and Police Committee.

Beaumont, Tex.—Another site has been selected on Sabine Pass avenue for new fire house.

Dallas, Tex.—A site has been secured on Kentucky street, near Fair Park, for the erection of a new fire station to be of brick and modern construction, work to be commenced in the near future.—Address Com-

PUBLIC BUILDINGS

Elton, Ala.—D. O. Whilldin, of Birmingham, has prepared plans for two new schools, brick and stone, two stories high, to cost \$25,000 and \$8,000.

Hartselle, Ala.—A site has been purchased for a new high school.—Address School Board.

Florence, Ariz.—Architect T. Fitzhugh, of Los Angeles, Cal., will prepare plans for new territorial prison.

Clarendon, Ark.—Contractors are now figuring on new Court House, for which \$50,000 has been appropriated.

Los Angeles, Cal.—Address Board of Education regarding new seven-room school, to cost about \$25,000.

Oxnard, Cal.—The City Trustees will soon award contracts for new jail, to be of brick and concrete construction and after plans by J. P. Kremple.

Pueblo, Col.—The Board of Commissioners of Pueblo County have been temporarily enjoined from letting contract for the \$400,000 Court House.—Albert R. Ross, New York City, and G. W. Roe, Pueblo, Associate Architects.

Mystic, Conn.—Architect Wilson Potter, New York City, is preparing plans for a two-story school building for the Board of Education.

New Canaan, Conn.—Plans are soon to be prepared for a new town house; a site known as the Dickerman lot has been purchased for the purpose.

Bloomington, Ill.—Architect George H. Miller has finished plans for remodeling the McLean County jail.

Braceville, Ill.—H. Boehme, Joliet, is preparing plans for a new one-story City Hall, to cost about \$5,000.

Chicago, Ill.—Property is to be purchased in the near future for the new court building; property on Market street will be purchased.—Address Mayor.

Joliet, Ill.—A new county jail is badly needed, and the question of new building is now being discussed.

Rock Island, Ill.—Contracts will soon be awarded for remodeling City Hall.—M. T. Rudgren, City Clerk.

Des Moines, Ia.—Council contemplates the erection of a large new public abattoir; cost about \$25,000.—Dr. Arthur B. Morse, Assistant City Physician.

Muncie, Ind.—At a recent meeting of Council the erection of a new city building was discussed; the new structure is to cost not more than \$110,000.—Address Board of Public Works.

Muscatine, Ia.—Contracts will soon be awarded for new county jail.

Louisville, Ky.—The city is considering voting in November on bond issue of \$1,000,000 to erect municipal hospital.—James F. Grinstead, Mayor.

Augusta, Me.—It has been ordered that a new high school building be built according to specifications of Freeman, Funk & Wilcox; the sum of \$5,000 has already been appropriated and Mayor Bunker stated that it was the intention to raise \$20,000 by issuing bonds, the remainder to be raised by taxes.

Towson, Md.—Steps are being taken to erect an addition to the court house; there is \$6,000 available for the purpose.

Boston, Mass.—Architect William Chapman has plans for interior alterations in the State House; cost, \$20,000.—Seward W. Jones, Chairman Committee.

Chester, Mass.—A site has been selected by the Chelsea Board of Control for the new City Hall, to be large and modern and erected at Broadway, Washington avenue, Chestnut street and the Library street.—Address Chairman McClintock.

Clinton, Mass.—Peabody & Stearns, architects, Exchange Building, Boston, are preparing plans for new Town Hall, to cost about \$160,000.—Jas. H. Carr, Town Clerk.

Nahant, Mass.—Plans are under way for improvements to the Town Hall.

New Bedford, Mass.—The City Property Committee has decided to accept plans by S. C. Hunt for new municipal building, to be erected at William and Sixth streets, to cost over \$230,000.

Detroit, Mich.—Architects Stratton & Baldwin are completing plans for a 3-story public bath house for the Commissioners of Parks and Boulevards.—Philip Breitmeyer, Commissioner.

Grand Rapids, Mich.—The city recently voted \$100,000 bonds for a new school at Oakdale and another at North Ionia.

Hibbing, Minn.—Architects Radcliffe & Price, Duluth, have completed plans for a \$100,000, three-story City Hall for the Village Board.—H. R. Weirick, President.

Mt. Iron, Minn.—Architects F. L. Young & Co., Duluth, are preparing plans for a two-story jail and court room, 24x60 feet, at Mt. Iron, for the town of Nichols.

Columbia, Miss.—Address the Mayor for further information regarding a new municipal building to be erected, to be used as a jail and Court House.

Hannibal, Mo.—The question of new City Hall at Fourth street and Broadway, to cost \$75,000, is being discussed.—Address Mayor O'Brien.

Kansas City, Mo.—Work will soon be commenced on new Ashland school on Twenty-fourth street and Elmwood avenue; cost, \$50,000.

St. Louis, Mo.—Architect J. A. Smith will start soon plans for two three-story police stations for the Police Board; total cost, \$60,000.

Beatrice, Neb.—The Board of Education can be addressed regarding new school at Fifth and Elk streets, to cost about \$53,000.—Mr. Begole, President.

Schuyler, Neb.—Work has been started on the new City Hall, to be modern, concrete and brick and of up-to-date construction.

Clayton, N. J.—Seymour & Paul A. Davis, 1600 Chestnut street, Philadelphia, Pa., have prepared plans for new school here, to be three stories high, brick and stone and cost \$40,000.

New Egypt, N. J.—Plans are under way for a new jail.—Address Town Council.

Stockton, N. J.—At a special election recently held by the Board of Education, the question of a new school in Van Dolan district was voted.

Tuckerton, N. J.—The Board of Education recently voted \$20,000 for new school and additional funds for improvements to present buildings.—Address School Board.

Gloversville, N. Y.—Architects Townsend & Fleming, Buffalo, are completing plans for a one-story park refectory building for Max Meyers, Gloversville.

Medina, N. Y.—Plans are being revised for a new Village Hall; Mallison & Soucie are interested.

Mount Morris, N. Y.—The Board of Education, Dr. F. B. Dodge, President, has voted to enlarge the school in the way of an annex to be of modern construction.

Oswego, N. Y.—Architect W. J. Beardsley, Poughkeepsie, has been retained to prepare plans for a three-story and basement jail and sheriff's residence, 150x115 feet, for the Oswego County Board of Supervisors; stone, press brick and structural iron, hardwood finish, electric fixtures, steam heat, water closets, bath tubs and lavatories; to cost \$80,000; bids will soon be called for by Board of Supervisors.—P. G. Hydorn, Chairman Special Jail Committee.

Rochester, N. Y.—Architect Leon Stern has completed plans for building for the Board of Park Commissioners.—M. O. Stone, Secretary.

Sag Harbor, N. Y.—A new high school is to be erected to take the place of the Pierson High School.

Syracuse, N. Y.—Architects Gaggin & Gaggin have been retained to prepare plans for a \$20,000 two-story and basement truant school building for the Board of Education.—J. R. Street, Chairman Building Committee, and the State Board of Charities, Albany.

Wappingers Falls, N. Y.—At a special election it was voted to rebuild the high school.—Address the School Board.

Lexington, N. C.—W. Harbin, city, has been awarded contract for construction work on a new county jail.

Tarboro, N. C.—The Board of Education has recommended the erection of new school houses in the different townships.

Cincinnati, O.—Work will soon be commenced on new high school on Eastern avenue, to be two and one-half stories high and cost \$105,000.—Address Board of Education.

Painesville, O.—At a recent meeting of the Chamber of Commerce, the question of new City Hall was discussed; President Nolan of the association can be addressed.

Youngstown, O.—A site will soon be secured for the new Court House proposed for this city.—Address Mayor A. W. Craver.

Oklahoma City, Okla.—Three new schools are to be erected, to be brick and fireproof, and cost about \$28,000.

Pawhuska, Okla.—Bonds, \$125,000, are to be issued by Osage County for a new jail and Court House.—J. A. Palmer, Chairman.

Albina, Ore.—Whitehouse & Honeyman, Portland, have prepared plans for a large and handsome new high school, to be three stories high, brick and stone, and cost about \$250,000.

Davenport, Pa.—Plans are under way for remodeling and improving the City Hall.—City Clerk Rudgren can be addressed.

Dunmore, Pa.—Architect John A. Duckworth, Scranton, is preparing plans for a \$50,000 high school building.

Easton, Pa.—A site will soon be selected in the rear of the City Hall for the new jail annex.—Address Mayor McKeen.

Ebensburg, Pa.—The erection of a new county jail is being considered.—Address Judge O'Connor.

Elwood City, Pa.—A new borough building is being discussed for this place.

Heilertown, Pa.—The question of erecting a new school, for which \$13,000 bonds have been proposed, is now being considered.—Address the School Board.

New Castle, Pa.—W. G. Eckles, Architect, Lawrence Trust Building, states that all bids have been rejected for constructing a three-story fireproof high school, 200x175 feet, to cost about \$200,000.

Norristown, Pa.—The County Commissioners will soon award contracts for addition to county jail; improvements to cost between \$15,000 and \$20,000 are planned.—Address Town Clerk.

South Greensburg, Pa.—Council will take action looking toward securing a new Town Hall; it is likely a committee will be appointed to consult the borough school board with a proposition that the board turns over to the borough the old school building replaced recently by a modern and larger structure. In case this can be secured, the present building will be given to the hose company. If not, it is likely a new and commodious Town Hall will be built and the hose company be permitted to retain its present quarters in the entirely inadequate Town Hall.

Pittsburg, Pa.—Charles W. Bier is receiving bids for a \$75,000 two-story and basement manual training school building for the Board of Education.

Pittston, Pa.—Plans have been prepared by Owen McGlynn, Simon Long Building, Wilkes-Barre, for new grammar school.

Washington, Pa.—The Town Council contemplates the erection of a new municipal building, to cost between \$14,000 and \$18,000.

Wilkinsburg, Pa.—The Board of Education has ordered plans for new school on Wallace avenue, to cost about \$200,000.

Manning, S. C.—Bids are to be received at the office of Charlton Du Rant, Secretary, for the construction of the County Court House, to be of modern construction and after plans by Shand & LaFaye, of Columbia.

Knoxville, Tenn.—Mayor Brooks is interested in new City Hall.

Accomac, Va.—Architects Frank P. Milburn & Co., Washington, D. C., have been selected by the Board of Supervisors of Accomac County to prepare plans for a jail building.

Appomattox, Va.—Contract will soon be awarded for new high school, to cost \$10,000.—Address School Board.

Lexington, Va.—Plans have been approved for new high school here, to cost \$20,000.—C. H. Robinson, Architect.

Roanoke, Va.—At a recent meeting of the Common Council, the question of purchasing a site and erecting a new police station on Henry street was discussed; to cost about \$15,000.

Bluefield, W. Va.—The question of a new City Hall is being discussed.

Buckhannon, W. Va.—Chaplin & Alexander have prepared plans for new high school, to be of modern construction and cost about \$50,000.

Cumberland, Wis.—About \$25,000 is to be borrowed from the State trust funds for the erection of a new City Hall and new electric light and water works plant.

ELECTRIC RAILWAYS

Huntsville, Ala.—Ed. L. Pulley is organizing a company with a capital of \$50,000, to build an electric road to the Fair Grounds; the new corporation will be known as the Huntsville and Chattanooga Interurban Electric Railway and Power Company. A power house will be established on the Nashville, Chattanooga and St. Louis Railway, near the fair grounds, and for the present this will be the source of the power to be used by the corporation.

Columbus, Ga.—A delegation of Crawford, Ala., citizens held a conference with the directors of the Columbus Board of Trade and the Columbus Railroad Company officials relative to constructing an interurban electric line between Columbus and Society Hill in Macon County, Alabama, via Crawford and Marvyn; the proposed line would be 34 miles long and would cost about \$300,000.—Address A. W. Hale.

Albia, Ia.—The Albia Interurban Company has voted to increase its capital stock to \$250,000 and to absorb the Hocking Line and power plant.

Lexington, Ky.—The Board of Directors of the Central Kentucky Traction Company has directed the management to proceed at once upon the construction of the interurban line between Lexington and Nicholasville.

Ava, Mo.—The Kansas City, Ozarks and Southern Railway Company of Ava has been incorporated with \$300,000 capital for purpose of constructing and operating a line of standard gauge electric railway from Mansfield in Wright County to Ava, a distance of fifteen miles.—J. H. Murray, H. E. Bach and others, Incorporators.

Kansas City, Mo.—Kansas City Southeastern Traction Company, recently incorporated to build a railway from Kansas City to Lee's Summit, has elected the following permanent officers: Dr. C. A. S. Sims, President; Howard W. Gibson, Vice-President; R. F. Shouse,

Treasurer; C. G. Minturn, Secretary; W. N. Collins, Auditor; George P. Norton, General Attorney; J. C. Herring, Chief Engineer, and C. W. McDaniel, Purchasing Agent; work is expected to begin on the line by August 15.

Asheville, N. C.—The Asheville and Carolina Railway Company, with principal offices in this city, has been incorporated with \$200,000 capital for the purpose of constructing an electric railway from Asheville to the South Carolina line, a distance of 35 miles.—C. F. White, J. W. Brunson, Jr., and others, Incorporators.

Fremont, O.—A project for electric railway between this city and Fostoria, right of way of which was secured by James D. McDonel, Fostoria, is stated to have been revived with the prospect that the line will be built soon; Mayor C. C. Anderson, Fostoria, is interested.

Miami, Okla.—Residents have formed a company and propose building an interurban line from Miami to the mines north of the place.

Elwood City, Pa.—W. J. Coursin, McKeesport, is making surveys for the projected electric railway to connect this place and Beaver.

Tacoma, Wash.—The Narrows Terminal Belt Railway Company has been incorporated with a capital stock of \$250,000 and proposes to construct a trolley line from the end of Center street to Belmarlow Beach. The company also intends the construction of a power plant near American Lake, and a water right allowing it to take 2,000 feet of water per second from the lake has been filed. It is intended to conduct the water from the lake to the Sound, which is 250 feet lower than the lake, in flumes. The incorporators are Lucian F. Cook, Henry L. Gray, Charles E. Cutter, C. Andrews Tonneson and Fred S. Cook.

Cheyenne, Wyo.—Sidney & Albert Bartlett have begun work for surveying Capitol avenue for the new street car line.

The Cheyenne Street Railway Company was incorporated with a capital of \$75,000 for the purpose of constructing a street railway; T. A. Cosgriff, Dr. Bennett and G. E. Abbott are among the incorporators.

BRIDGES

Grangeville, Ida.—The County Commissioners have decided to rebuild the wagon bridge at Kooskia and to appropriate \$1,000 toward the bridge at Stites; both of these bridges were washed away by the high water last month; the Stites bridge will cost \$3,000.

Farmers, Ky.—The city invites estimates for construction of toll bridge over Licking River at Farmers, to have 16-foot roadway, 171-foot main span and 70-foot shore span; the company is now placing masonry; plans are at the office of Leete-Maupin Engineering Company, Huntington, W. Va., and of the company at Farmers.—H. Van Antwerp, Secretary.

Springfield, Mo.—City Engineer Harry Horton will soon advertise for bids for the construction of the Jordan Creek bridges; one across the creek at Boonville street and one at Main street.

Missoula, Mont.—Council and Mayor are discussing ways and means to build a \$10,000 bridge across the Missoula River at Higgins avenue.

Ralston, Okla.—The Ralston Bridge and Improvement Company has been incorporated with capital stock of \$6,000. The incorporators are: E. A. Bullock, V. D. Ebedwein and E. Cook.

Erie, Pa.—Select Council has authorized the advertisement for bids for materials for the concrete bridge over Mill Creek at Thirteenth street, the contract to be awarded by the Street Committee.

Harrisburg, Pa.—A communication from Mr. Young, First Ward, asked that City Engineer Cowden show reasons why he has not advertised the ordinance relating to the Hemlock street bridge.

Monongahela, Pa.—The court has handed down a decree approving the petition for issue of \$125,000 4 1/2 per cent, 20-year bonds for the building of the joint county bridge over the Monongahela River at Monongahela.

Mitchell, S. D.—Mayor Hitchcock has received the new plan for bridge that is to be built across Dry Run and connecting the north and south side of the city; the plans call for constructing of the bridge in reinforced concrete.

Austin, Tex.—The election held on the question of the issue of \$350,000 bonds, \$200,000 for a bridge across the Colorado River and \$150,000 for good roads in the county, carried by a majority of about 800.—Address County Auditor.

Spokane, Wash.—The plans and specifications of City Engineer Ralston have been adopted by Council for the erection of new bridges at Oliver and Mission avenues; both structures are to cost about \$150,000; it is probable that the bridges will be built of reinforced concrete; advertisements for the letting will be advertised later.

MISCELLANEOUS

Pratt City, Ala.—An ordinance is before Council for an issue of \$150,000 bonds for improvement purposes.—Address Mayor Lacy.

Tucson, Ariz.—A special election is to be called for improvements to be made to Washington Park; a large new building is to be erected.

Red Bluff, Cal.—Plans are under way for a new city park; site has as yet not been selected, but funds are being raised.

Jacksonville, Fla.—The Board of Public Works is now considering the erection of a new crematory.

Lakeland, Fla.—Council has passed an ordinance calling for an election for the issuance of municipal bonds at any early date; the amount of the proposed issue will be \$40,000, which will be used for public improvements, as follows: New school buildings and additions to the large brick building now in use, \$15,000; additions and extensions to water works system, \$15,000; paving and improving streets, \$5,000; additions and extensions to electric light plant, \$5,000; a Board of Public Works will also be elected at this election, who will direct the improvements and control the funds arising from the sale of bonds. The issue will be carried without doubt.

Caldwell, Ida.—Plans are under way for establishing a new park at Lake Howard.

East St. Louis, Ill.—W. J. Crocken, City Engineer, announces that plans are now being prepared for a concrete wall levee along bank of Cakokia Creek; ordinance will not be ready for 60 or 90 days.

Indianapolis, Ind.—Property owners in the neighborhood of College avenue and Thirteenth street have presented petition to the Park Board asking that the grounds be purchased for a new city park.

Muncie, Ind.—J. Clyde Power is planning to lay out tract north of Highland avenue for McCulloch Park; improvements are estimated at a large cost.

Terre Haute, Ind.—An ordinance is before Council for an issue of \$75,000 bonds for a new crematory and for public improvements.

Iola, Kan.—At a recent meeting of the city Park Board plans were discussed for improvements to the city parks.

Minneapolis, Minn.—The question of new park is now being discussed; proposed site is bounded by Washington, Forty-fourth and Lyndale avenues and the Soo tracks.—Theo. Wirth, Superintendent of Parks.

Red Wing, Minn.—W. A. Finkenburg, of Winona, is in charge of the construction of new park.

St. Paul, Minn.—The Board of Park Commissioners has decided to act favorably in regard to \$45,000 bond issue for improvement and extension of St. Paul parks.—Address City Comptroller.

Buffalo, N. Y.—F. G. Ward, Commissioner of Public Works, has recommended that the Buffalo Fertilizer Company be awarded contract for ash and garbage collection at its bid of \$186,000, less five per cent., making \$176,700 for one year; also that the bids of the Sanitary Collection and Reduction Company to build and operate District No. 2 be rejected and new bids invited; the Board of Aldermen has the subject in hand.

Troy, N. Y.—New bids are to be advertised for garbage plant.

Commissioner of Public Works Shields has been authorized to expend \$100 for a spring-kling cart for Prospect Park.

Columbus, O.—J. S. Osborn has been appointed Engineer to draw plans for a garbage disposal plant on the reduction system for the city; this means the abandonment of the plans which have been before the Board of Public Service for many months, and on which no bids were ever received, though frequently called for; the plans he will produce will not provide for a building, only for machinery; bids will be called, but if they are not satisfactory the Board undoubtedly will undertake the construction itself; when these plans have been approved invitations will be extended for housing the plant.

Conneaut, O.—Bids will be received July 27 for the purchase of \$25,000 city improvement bonds.—D. R. Watson, City Auditor.

Hamilton, O.—Plans are under discussion and special election is to be held Aug. 15 to vote on new park.

Springfield, O.—Plans are under way for new park extensions.—Address Commercial Club.

Donora, Pa.—Bids were received for the collection of garbage from July 15 to March 15 next; the bid of Joseph Johnston was the lowest, at \$945, and the contract was awarded to him; the other bid was from Robert Weaver, at \$150 per month.

Mr. Deper reported that at Homestead the borough bought a quantity of garbage cans and sold them to the public at \$1 each; he thought the borough could save the people of Donora some money by following the example; no action was taken.

Erie, Pa.—The Sealer of Weights and Measures has been authorized to purchase

new weighing apparatus at an expense not to exceed \$90.

Pittsburg, Pa.—The measure authorizing a contract for the removal of garbage on the North Side from August 1 for a period of one year passed finally; the Allegheny Garbage Company was the successful bidder and the price is not to exceed \$39,000.

Mayor Guthrie has signed the Hebron Street Railway ordinance, and that for the purchase of the Wilbert Grove property on Mount Washington. The latter is to be used for park purposes. Councils adjourned until the regular meeting in September.

Scranton, Pa.—At a recent meeting of the Council the question of new playground and park on Scranton street was discussed.—Mayor Dimmick is interested.

Providence, R. I.—Contracts are soon to be awarded for municipal improvements.—Address the Mayor for further information.

Deadwood, S. D.—A special meeting was held recently, when it was voted to expend \$25,000 in purchasing grounds and improving same for a new park.

Beaumont, Tex.—Plans are under discussion for new park.

Seattle, Wash.—The Health and Sanitation Committee of Council recently discussed plans for a new garbage plant.—Wm. H. Murphy, Chairman.

BIDS RECEIVED

Bisbee, Ariz.—The contract with Grenard & Hapgood, made with their agreement to take care of the sewage of the city, has been approved by Council.—Alderman Allen, Chairman Street Committee.

Oakland, Cal.—Council has awarded the following contracts:

Improving Cherry street: To Piedmont Paving Company; Grading street, including sidewalk (cutting), 70 cents per cubic yard; macadamizing, 7½ cents per square foot; curbing with redwood, 13 cents per linear foot; gutters, grouted, 15 cents per square foot; wooden bridges, \$5 each.

Cavour street: To Berkeley Rock Co.; Grading street, including sidewalk (cutting), 60 cents per cubic foot; macadamizing, 7 cents per square foot; curbing with redwood, 15 cents per linear foot; gutters, concrete, 15 cents per square foot; curverts, 6x30 inches, \$2.75 per linear foot.

Fifty-eighth street: To Blake & Bilger Co.; Grading street, including sidewalk (cutting), 60 cents per cubic foot; macadamizing, 7 cents per square foot; curbing with redwood, 13 cents per linear foot; gutters, grouted (broken rock), 13 cents per square foot.

Manila avenue: To Blake and Bilger Co.; Grading street, including sidewalk (cutting), 70 cents per cubic yard; macadamizing, 7½ cents per square foot; curbing with redwood, 13 cents per linear foot; sewer (8-inch), \$1.20 per linear foot; lampholes, \$10 each; gutters, grouted (broken rock), 14 cents per square foot; Y branches, 5-inch opening, 25 cents each; wooden bridges, \$4.50 each.

Fifth street: To Louis Lima & Co.: Furnishing and laying 8-inch pipe, at \$1.35 per linear foot; furnishing and laying Y branches at 50 cents each extra; constructing brick manhole, with cover, complete, \$40.

Grove street: To the Barber Asphalt Paving Company; Grading street, 2 cents per square foot; asphalt pavement, 19.6 cents per square foot; concrete gutters, 19.6 cents per square foot; concrete curbs, 66 cents per linear foot; 24-inch conduit, \$2.60 per linear foot; 18-inch conduit, \$2.30 per linear foot; 12-inch conduit, \$1.40 per linear foot; grated iron covers, \$15 each; 8-inch by 30-inch cast iron and concrete culvert, \$2.60 per linear foot; catchbasins, 3-foot, \$70 each; catchbasins, 2-foot, \$70 each; 3-foot storm-water inlet, \$55 each; 2-foot storm-water inlet, \$55 each.—Frank R. Thompson, City Clerk.

San Francisco, Cal.—The Consumers' Light and Power Company has let contracts for machinery and electric equipment for a direct-current central station plant, to be installed in the basement of the Whitney Building on Geary street, as follows: For four engines with a total of 750-h.p. to Hunt, Mirk & Co., 605 Howard street; four 220-volt generators to the Westinghouse Electric and Manufacturing Company, Second and Howard streets, San Francisco; for boiler plant, including five large boilers, to Charles Moore & Co., 63 First street.

New Britain, Conn.—Bids were received by the Board of Water Commissioners for laying about eight miles of water pipe: (a) Section 2 and (b) Section 3: James E. Bunting and Robert Bull & Co., Inc., New York, (a) \$25,711, (b) \$27,105; Henry E. Fox, New York, (a) \$37,047, (b) \$31,745; J. Edward Tracy, Derby, Conn., (a) \$27,180; Richard W. Sherman, Utica, N. Y., (a) \$35,616, (b) \$35,326; Long & Little & Co., Leominster, Mass., (a) \$27,246, (b) \$24,999; Donato Cuozzo, New York, (a) \$28,499; James H. Ferguson, Dorchester, Mass., (a) \$34,780, (b) \$29,089; Falvey & Kelly, Dorchester, Mass., (a) \$25,003; J. H. Clements & Son, Schenectady, N. Y., (a) \$51,511; Fred S. & A. D. Gore Corporation, Dorchester, Mass., (b) \$27,605. Contract

for Section 2 will probably be awarded to Falvey & Kelly, and for Section 3 to the Long & Little & Co.—H. D. Humphrey, Chairman of Board.

Washington, D. C.—Bids for all classes of street improvements to be executed at such times as they may be required during the ensuing year were opened in the Board room at the new District Building, July 11, by Daniel E. Garges, Chief Clerk of the Engineer Department. The Cranford Paving Company and the Brennan Construction Company, close rivals in the past, were again in the field for the greatest prize of the year, the asphalt contract. The Cranfords presented the low bid and secured the award and with it the privilege of doing about \$200,000 worth of work for the municipality in the current fiscal year. Other bids received were for grading several streets and avenues, for laying bitulithic pavement, for laying asphalt-block pavement and for installing a ventilating plant in the police court. The proposals under the different heads follow:

For paving streets and avenues with sheet asphalt: The Barber Asphalt Company, Philadelphia, \$1.60 per square yard; Cranford Paving Company, \$1.48; Brennan Construction Company, \$1.56.

For laying vitrified block gutters: Barber Asphalt Company, \$1.30; Cranford, \$1.17; Brennan, \$1.27.

For grading certain streets and avenues: E. G. Gummell, Washington, Mills avenue, Minnesota avenue, 40 cents per square yard, and Albemarle street, Forty-first street and Western avenue, Rittenhouse street and Western avenue and Kearney street, 45 cents; J. M. Duncan, Alexandria, Va., Mills avenue, 33 cents; Albemarle street, 69 cents; G. B. Mullin, Washington, Albemarle street, 37 cents; Forty-first street and Western avenue, 27 cents; Warren F. Brenizer, Washington, Albemarle street, 40 cents; Minnesota avenue, 27½ cents; Stutler & Ready, Mills avenue, 42 cents; Kearney street, 37 cents; L. M. Johnston, Arlington, Va., Albemarle street, 53 cents; Minnesota avenue, 43 cents; Kearney street, 49 cents. Contracts were awarded as follows: G. B. Mullin, Albemarle, Rittenhouse and 41st streets and Western avenue; to W. F. Brenizer Company, Minnesota avenue; to Stutler & Ready, Kearney street.

For laying bitulithic pavement: Atlantic Bitulithic Company, Richmond, Va., \$2.50 per square yard. (The limit set by Congress for any class of street paving in the District of Columbia is \$1.85 per square yard.)

For laying asphalt block pavement: Washington Asphalt Block and Tile Company, 5-inch paving in the city, \$1.80 per square yard; 4-inch paving, east of Rock Creek, \$1.65; west of Rock Creek, \$1.80; awarded contract involving \$40,000.

For ventilating plant at the Police Court: D. D. Condon, \$3,600; Dunigan Plumbing Company, \$2,964.

The contract for the interior marble work for the United States Senate building has been let by Elliott Woods, Superintendent United States Capitol Building and Grounds, to the Vermont Marble Company, of Proctor, Vt., at \$206,571.

The following bids were received for construction of an assembly hall for the Government Hospital for the Insane, Washington: The Brennan Construction Company, Washington, D. C., \$99,801; with extension, \$104,801; time, May 1, 1909. Pavarini & Wyne, Washington, D. C., \$92,000; with extension, \$96,000; May 15, 1909. Herman Probst, New York, \$102,900; with extension, \$107,600; May 1, 1909. Newman & Smith, Washington, D. C., \$105,495; with extension, \$109,975; April 1, 1909. The Thompson-Starr Company, Washington, D. C., \$97,785; with extension, \$101,761; eight months.

The Commissioners have approved the recommendation of Chief Belt of the Fire Department that the bid of J. Kaufman & Sons of Baltimore, Md., for furnishing horses for the fiscal year 1909 at \$275 each be accepted. The Kaufman bid was the only one received. Chief Belt said he believed the proposal to be reasonable, as the horses heretofore furnished by this firm have been satisfactory. Approximately forty-eight horses will be purchased. The specifications provide that they shall be geldings, not less than five or more than nine years old; that they shall stand not less than 16 or more than 17 hands high and shall weigh not less than 1,300 or more than 1,500 pounds.

Braintree, Fla.—The Crockett Paving Company, of Birmingham, Ala., has been awarded the contract for paving at the following bid: 6,500 square yards, with brick, including excavation and foundation, \$1.97; 20,000 square yards of macadam, 75 cents; 14,000 square yards 11-inch marl roads, 65 cents.

Aurora, Ill.—The McCarthy Improvement Company was low bidder and has been awarded contract for about 42,000 square yards brick paving, etc., as follows: Center

avenue and Grant place (a) 8,575 yards brick at \$1.78 and 6,154 feet curb and gutter at 50 cents, as on all the other jobs; Clark street, (b) 1,345 yards brick, at \$1.80 and 906 feet curb and gutter; South River street, (a) 11,690 yards brick, at \$1.70 and 1,850 feet curb and gutter; Fifth street, (d) 12,224 yards brick, at \$1.80, and 8,032 feet curb and gutter, and for the street car company's portion he bid \$1.75 for brick, there being 550 yards on Clark street (e); 3,700 yards on Fifth street (f), and 3,270 yards on South River street (g). The totals of the bids received follow: McCarthy Improvement Company, (a) \$18,340.50, (b) \$2,874, (c) \$20,798, (d) \$26,019.20, (e) \$612.50, (f) \$6,475, (g) \$5,722.50. Standard Construction Company, (a) \$18,668.35, (b) \$2,904.45, (c) \$21,898.90, (d) \$26,316.16, (e) \$665, (f) \$7,030, (g) \$6,213. J. E. Salfisburg & Co., (a) \$18,663.05, (b) \$3,062.30, (c) \$2,904.45, (d) \$21,290, \$21,898.80, (b) \$26,878.40, (e) \$665, (f) \$6,845, (g) \$6,049.50. A. W. Eisenmeyer, (a) \$20,156.40, (b) \$3,206.70, (c) \$22,335, (d) \$28,411.52, (e) \$637, (f) \$6,734, (g) \$5,951.40. Marquette Construction Company, (a) \$19,283.75, (b) \$3,116.10, (c) \$22,025.45, (d) \$27,363.84, (e) \$693, (f) \$7,326. J. A. Heineman, (a) \$19,784.13, (b) \$3,143, (c) \$21,794.60, (d) \$27,837.32. Forrestal-Feyer, (a) \$20,055.50, (b) \$3,129.55, (c) \$22,902.20, (d) \$28,219.52, (e) \$696.50, (f) \$7,326, (g) \$6,409.20. C. J. Jones, (e) \$665, (f) \$7,030, (g) \$6,016.80.

Elgin, Ill.—The contract for the construction of a sub-station for the Aurora, Elgin & Chicago Railroad Company, to be located on Grove street, has been awarded to L. E. Palm, of Elgin, for \$13,900.—E. C. Faber, General Manager, Wheaton.

Lake Forest, Ill.—E. M. Laing has the contract, at \$10,165, for grading, draining, paving and macadamizing sundry streets.—David H. Jackson, Chairman Board of Local Improvements.

Lincoln, Ill.—The Board of Local Improvements has let contract for paving with brick, on concrete base, and concrete curb and gutter, on North Chicago street, to Geo. A. Peter, Sycamore, Ill.—Edwin B. Maltby, President.

Taylorville, Ill.—The contract for constructing a sewer in Shawnee street, has been awarded to Hamilton Bros. Construction Company, 4235 Wabash avenue, Chicago, at \$13,953.—J. W. Deppert, City Engineer.

Wilmette, Ill.—Bids were received by the city for (a) centrifugal pumps; (b) induction motors at 110 R. P. M.; (c) at 115 R. P. M.; (d) 26,400 feet of lead-covered cable; John A. Roebling's Sons Co., Chicago, Ill., (a) \$25,212; the American Well Works (a) \$48,000; Standard Underground Cable Company, (d) \$24,618; Westinghouse Electric & Manufacturing Company, Chicago, Ill., (b) \$21,100; (c) \$14,900; Crocker-Wheeler Company, Ampere, N. J., (b) \$14,702; (c) \$12,257; W. A. Jackson Company, Chicago, Ill., (b) \$18,922, (c) \$12,276, (d) \$25,146; Western Electric Company, Chicago, Ill., (b) \$12,180, (c) \$10,575; Camden Iron Works (R. D. Wood & Co.), (b) \$36,850, (c) \$34,465.

Danville, Ind.—The Hackedorn Contracting Company, of Indianapolis, has been awarded contracts for the construction of the following reinforced concrete bridges in Hendricks County: One double 75-foot arch bridge at Plainfield; one 60-foot bridge near Danville; one 30-foot bridge near Cartersburg. Other bidders were: National Bridge Company, W. C. Halstead & Co., Attica Bridge Company, Indiana Bridge Company and LaFayette Engineering Company; although the bids for steel bridges were much lower than the reinforced concrete arches, the County Commissioners selected the concrete construction; the bridges were designed by the Block Bridge and Supply Company, of Indianapolis.

Delphi, Ind.—The contract for constructing a gravel road was let to E. E. Barnard for \$7,000.

Flora, Ind.—The Town Trustees let contract to Con Kelleher & Co., Frankfort, for grading and paving with brick sundry streets.—E. L. Colvin, Town Clerk.

Hartford City, Ind.—The following bids were received by the city for street paving: Hollman & Co., Rochester, Ind., Indiana block, \$17,444; Logan brick, \$17,368; Metropolitan, \$17,718; J. P. Knight, of Greenfield, Ind., Indiana, \$17,519; Logan, \$17,777; Metropolitan, \$17,847.

Indianapolis, Ind.—The Board of Public Works awarded the contract for the construction of the College avenue sewer, seven miles long, to the Mansfield Engineering Company, the low bidder, who offered to do the work for \$27,000 less than the cost estimated by the City Engineer, which was \$150,500.

The Citizens' Gas Company has awarded to the Kerr-Murray Manufacturing Company of Fort Wayne the contract for the construction of a gas holder of 1,000,000 cubic feet capacity and one of 25,000 cubic feet capacity, as a relief holder for the water gas set, which is to be constructed as a reserve plant of the company; contract price, about \$57,000.—George Summers, General Superintendent and Gas Engineer.

Laporte, Ind.—The Commissioners of La- porter County let contract to W. B. Hutchinson at \$3,757, for constructing macadam roads in Michigan township.—Charles H. Miller, County Auditor.

Ligonier, Ind.—The C. L. Olds Construction Company, of Fort Wayne, has been awarded contract for the electric light plant which will be erected in the water works pumping station.

Louisville, Ky.—Staebler & McFarland, contractors, sent in the lowest bid of nine competing firms and were awarded a \$12,000 contract for the construction of seventeen pieces of sidewalk by the Board of Public Works; the price at which the work will be done under the contract ranges from 90 cents to \$1.10 a square yard; granite will be the material of construction for the new sidewalk. The purchase price will be secured from abutting property owners, under the provisions of the abutting property law; granite was chosen by the Board in preference to brick because of its durability; although it costs more, it is deemed the cheaper material of the two because its superiority in wearing power is greater in degree than its excess in cost. Unsuccessful bidders for this work were as follows: Schwickl Bros., Creyder & Underwood, Henry Bickel, L. R. Figg, George W. Gosnell, American Construction Company, G. W. Younger and George Mitchell.

A contract has been signed with F. G. Wagner for putting up 45,000 signs on street corners at 21 cents apiece.

Louisville, Ky.—The contract for the building of Section A of the Twenty-fifth street relief sewer has been awarded by the Board of Sewer Commissioners to Hines Bros., of Canal Dover, O., the lowest of seven bidders on the job; the price for the construction of this section of the sewer, which aggregates 4,000 feet in length, is around \$30,000. The contract specifies that the work is to begin at once.

Owensboro, Ky.—The bids for the erection of the new Court House at Calhoun have been received by the building committee; the lowest bid was that of the Lockett Bros.; the Building Committee will report on the bids to the Fiscal Court.

Baltimore, Md.—David M. Andrews Company has been awarded contract for the erection of a new library building at Westminster for the Western Maryland College.—Chas. M. Andrews, Architect.

The Charles McCaul Company, 613 American Building, Baltimore, was low bidder at \$118,797 for erection of addition to United States postoffice; specified time for completion of building is December 1, 1909.—James Knox Taylor, Supervising Architect, Treasury Department, Washington, D. C.

Upper Marlboro, Md.—B. F. Smith, Washington, D. C., has been awarded the contract for the remodeling of the Court House at Upper Marlboro, Prince George County, Md.; the contract price is \$9,213.

Boston, Mass.—The Park Commissioners let contract to L. K. Marston, at \$4,702, for a locker building on the Cottage street playgrounds.

Bids were received as follows by the Charles River Basin Commission, 367 Boylston street, for constructing five timber submerged outlets for the Boston Marginal conduit: Hiram W. Phillips, 734 Washington street, Quincy, Mass., \$42,500; William L. Miller, 19 Milk street, Boston, \$58,874; Coleman Bros., 15 Court Square, Boston, \$59,050; W. H. Ellis, 17 Milk street, Boston, \$63,456.

Brockton, Mass.—The Committee on Water awarded the contract for furnishing pipe to the Water Department to the United States Cast-Iron Pipe and Foundry Company, at \$24.20 a ton, f. o. b. Brockton; there are 100 feet of 10-inch, 200 feet of 8-inch and 200 feet of 6-inch pipe. This is 95 cents a ton lower than the committee paid in February; there were five bidders.

Concord, Mass.—The following bids were received by Metcalf & Eddy, Engineers for the Water Commissioners, for laying cast-iron pipe and appurtenances and constructing a reservoir: Frank Williams & Co., 19 Willard street, Boston, \$22,011; Bruno & Petitti, 18 Tremont street, Boston, \$23,511 (awarded contract); Charles N. Taylor, Wellesley, \$23,636; Auguste Saucier, South Framingham, \$23,743; B. Perrini & Co., Ashland, \$24,567; D. Cuozzo, 53 Park Row, New York, \$25,527; the Loring N. Farnum Company, 53 State street, Boston, \$26,360; M. McDonough, Swampscott, \$27,571; Falvey & Kelly, 15 Intervale Park, Dorchester, \$27,814; Long & Little Co., Leominster, \$28,651; Coughlin & Sheils, 43 Tremont street, Boston, \$28,842; Rowe Contracting Company, Melrose, \$29,658; G. Louis Burnham, Andover, \$30,605; Coleman Bros., 15 Court Square, Boston, \$30,787; Charles G. Crabb & Co., Wintrop, \$31,564; Donovan & Phillips, 15 Beacon street, Boston, \$41,669; M. Russo & Son, 240 North street, Boston, \$49,984.

Fall River, Mass.—The following bids have been received by John T. Coughlin, Mayor, for buildings for the contagious hospital,

consisting of a three-story brick and stone administration building, a laundry and boiler room, a domestic building and two wards: Mitchell Nicholson, \$92,300, \$161,683; James A. Donnelly, 225 Bedford street, \$64,250, \$144,079; Beattie & Cornell, 33 North Quarry street, \$92,000, \$161,500; Patrick Corrigan, 4 Morgan street, \$83,429, \$145,290; Arthur Puleston, \$78,800, \$62,000; Beattie & Wilcox, 840 Bedford street, \$86,916, \$192,170; William A. Borden, 389 Second street, \$2,400, \$157,500.

Gloucester, Mass.—Three proposals for furnishing the city with a new piston fire engine pump for steamer two, East Gloucester, were received, as follows: American La France Company, \$3,000; International Power Company, \$3,000; International Power Company, new boiler, \$1,000; the contract was awarded to the American La France Company at its bid of \$3,000.

Lawrence, Mass.—Six bids for paving Essex street with wooden blocks were opened at a special meeting of the Board of Aldermen, but no definite action was taken towards awarding the contract. Three of the bidders complied with City Engineer Marble's specifications, and three bidders, including the only local bidder, the Lawrence Granite Company, modified the specifications. The work consists of 4-inch block for 28,000 square yards on 6-inch concrete base and 830 cubic yards of excavating below the grade of the concrete filling. The bids follow: U. S. Wood Preserving Company, N. Y. (informal), \$3.50 per square yard finished paving, 49 cents per cubic yard of excavating, work to be completed Nov. 15, 1908; Simpson Bros., Boston, \$3.41 per square yard finished paving, 43 cents per cubic yard excavating, work to be completed Dec. 1, 1908; Richard Lamb, New York, \$4.19 per square yard finished paving, \$1.17 per cubic yard excavating; Lawrence Granite Company (informal), \$3.40 per square yard finished paving, 50 cents per cubic yard excavating, work to be done Nov. 30, 1908, and blocks of company's own make; Coleman Bros., Boston (informal), \$3.88 per square yard finished paving, 80 cents per cubic yard excavating, work to be completed November 1, 1908; Frank H. Cowin Company, Boston, \$3.60 per square yard finished paving, \$1 per cubic yard excavating, work to be completed Nov. 20, 1908. The totals: Lawrence Granite Company, \$95,615; Simpson Bros., \$95,836.90; U. S. Wood Preserving Company, \$98,406.70; F. H. Cowin Company, \$101,630; Coleman Bros., \$109,304; Richard Lamb, \$118,291.

The Lawrence Granite Company, the sole bidder, was awarded the contract to furnish 50,000 granite blocks to the Street Department at \$1.24 per square yard, a Boston block being used.

The following bids were received for the erection of a concrete wall on Barker street; Philip Holland, \$1,435; Joseph Weagenbach, \$1,595; F. D. Davis, \$1,774.50; M. O'Mahoney, \$1,838.50; I. Dube, \$1,997; Trumbull Company, \$2,400; the contract was awarded to the low bidder, Philip Holland.—A. D. Marble, City Engineer.

New Bedford, Mass.—The Committee on City Property, which received bids for the alteration of the library building into a municipal office building on June 10, has awarded contract to John B. Sullivan & Son, New Bedford.—Samuel C. Hunt, Odd Fellows' Building, Architect.

Detroit, Mich.—Council has awarded contracts for paving with sheet asphalt, on concrete foundation, as follows: To J. A. Mercier, 210 Hammond Building; Beech street, \$3,985.76; Fifth street, \$11,683.86; Orchard street, \$3,095.20; Second avenue, \$5,353.27; Spruce street, \$5,091.19, and Scott Avenue, \$6,629.28. Also to T. E. Currie, 17 Peninsular Savings Bank Building; Clinton Avenue, \$3,878.68, and Mullet street, \$4,830.16.

Ionia, Mich.—The contract for concrete abutment, bids for which were received May 29, has just been let at \$6 per cubic foot, and excavation at 75 cents per cubic foot; the contract for steel span bridge was not let and new bids will be received July 28.—C. I. Goodwin, Chairman County Commissioners.

Ironwood, Mich.—The Hennepin Bridge Company, of Minneapolis, Minn., has secured the contract for constructing a steel bridge across the Montreal River, between Ironwood, Mich., and Hurley, Wis., at \$5,700.

Hallock, Minn.—The Warren Machine and Iron Works, Warren, Minn., were the only bidders for constructing 300 feet 15-inch vitrified clay pipe in 3-foot trench, loamy clay excavation, and no ground water to be handled, at 75 cents, including one manhole at \$70 and one catchbasin.—J. E. Carroll, Crookston, Engineer.

Clarksdale, Miss.—The Delta Construction Company, Memphis, Tenn., was awarded the contract for constructing about five miles of sidewalks, with curbs, gutters, street crossings, driveways and inlets, all of concrete.—W. H. Fitzgerald, Jr., Mayor; Walter G. Kirkpatrick, Engineer, Jackson.

David City, Neb.—W. M. Lana, Harlan, Ia.,

was low bidder for installing sewer system, for which M. A. Earl & Co., Chicago, Ill., were Engineers, his bid being \$9,436.80, other bids being as follows: York & Foy, University place, Neb., \$12,795.50; Jacob Zeig, York, \$14,121; George M. King Construction Company, Des Moines, Ia., \$10,551.40; J. O. Skilbred, St. Joseph, Mo., \$10,234.40; Joseph Jensen, Omaha, \$11,558.20; Lang & Brown, University place, \$10,019; J. J. Dunnegan, Shenandoah, Ia., \$13,719; McKay & Cathral, Omaha, \$11,171; C. A. Bemis, Seward, \$9,518.—W. S. McCoy, City Clerk.

Freehold, N. J.—The Board of Chosen Freeholders of Monmouth County let contract to the Monmouth Contracting Company, Red Bank, N. J., at \$24,998, for constructing 17,497 feet of stone road.—E. Everett Throckmorton, Engineer.

Hawthorne, N. J.—J. Smith Sowerbutt, 23 Paterson street, Paterson, was the successful bidder for macadamizing and grading portions of Second and South streets.—William E. Thompson, Borough Clerk.

Elizabeth, N. J.—The Board of Aldermen received six bids for the purification of the Elizabeth River and the prevention of further pollution by building an intercepting sewer in the middle of the stream, with a pumping station at the upper end of it at Union street and Westfield avenue. The sewer will be about 18,000 feet long from its start to the terminal of Staten Island Sound; the bids received were as follows: Matthew Wade, Elizabeth, \$136,381.63; Gallo & Musso, Newark, \$136,384.34; J. H. Gray & Co., New York, \$177,005; W. J. McCloud & Co., Elizabeth, \$194,901; A. E. Sandford & Co., New York, \$201,887; Harrison Construction Company, Newark, \$212,164. The bids were referred to the special committee on river improvement. If the committee decides the sewer shall be built of reinforced concrete, the Newark firm's bid is the lowest. If brick is selected, then the Elizabeth man's figure is lowest.

Plainfield, N. J.—Six bids were received at the July meeting of Council for the proposed sanitary sewer extensions on Watchung avenue, near the raceway and on Lake street, and J. H. Sammiss, of Belleville, figures, \$692.90, were the lowest for the work; the specifications call for 710 feet of 8-inch vitrified pipe and three lengths of cast-iron pipe over the raceway on Watchung avenue; the bids were as follows: J. H. Sammiss, Belleville, \$692.90; Michael Garafano, Summit, \$847.40; Warren B. Travell, Plainfield, \$894.40; Atlas Construction and Engineering Company, Reading, Pa., \$948.56; Petro Luciano, White Plains, N. Y., \$1,027; Mapleton Engineering and Construction Company, Brooklyn-Ridgewood, \$1,312.30; all bids were referred to the Street and Sewer Committee and Engineer A. J. Gavett.

Wildwood, N. J.—J. F. Shanley, Philadelphia, Pa., has been awarded the contract at about \$30,000 for macadamizing here.

Albany, N. Y.—Bids for doing considerable improvement work have been submitted to the Board of Contract and Supply. For the paving of Rensselaer street bids were submitted by John M. Holler, T. Henry Dumary, M. F. Dollard, Edward F. Dillon and Mulberry Bros. For laying a sewer in Delaware avenue south of Second avenue, bids were submitted by John Doyle and J. M. Holler. For the grading of Ontario street, from Central avenue to Western avenue, bids were handed in by John M. Holler, J. M. Malcolm, M. F. Dollard and Mulberry Brothers; all bids were referred to Commissioner of Public Works Greenalch. Three bids were received for laying the conduits and placing cables in Washington Park for the new electric light system. The bids were: Hickey Contracting Company, of New York, \$6,621.82; B. and C. Electrical Company, Utica, \$3,576.30; Albany Electrical Illuminating Company, \$3,700.

Auburn, N. Y.—Following are the details of the low bidders for constructing subways and pavements in Garden and William streets, total of which were reported in the "Municipal Journal and Engineer" July 15: Brayer Brothers bid \$2.20 for asphalt paving on the two jobs, there being 4,500 square yards in Garden street and 3,800 in William street, also on limestone curbing, 99 cents; curved limestone curbing, \$1.50; sandstone curbing, 95 cents; curved sandstone curbing, \$1.50; concrete curb and gutter, 85 cents; headers, 65 cents; catchbasins, \$65; repairing catchbasins, \$25; relaying old walks, 4 cents per square foot; laying new walks, 16 cents; brick pavement, \$3.

For the subways the two bids of Brayer Brothers were also identical, being 87 cents for 6-duct tile, there being 2,400 lineal feet in Garden street and 2,050 in William street, 4,260 feet iron pipe, 34 cents; 90 iron pipe bends, \$1.50; 11 double manholes, \$195; two single manholes, \$100; extra excavation, 80 cents per cubic yard; extra brick, \$16.50 per 1,000; extra Portland cement concrete, etc., \$8 per cubic yard.—W. Thomas Wooley, City Engineer.

Green Island, N. Y.—The Public Improvement Commission awarded contract to E. Kelly for 1,070 square yards of brick paving at \$2.54, and for 275 lineal feet of granite coping at \$4.65, etc., on Hudson avenue and Hamilton street.—William H. Jarvis, Secretary.

Jamestown, N. Y.—James P. Calahane was awarded the contract by Council for the construction of sewers at \$38,863.

New York, N. Y.—The M. Baird Contracting Company, 433 East Ninety-second street, was low bidder at \$13,934 for repaving with granite block pavement, on concrete foundation, the present roadway of East One Hundred and Forty-ninth street, from Morris to Mott avenue, for the Borough of the Bronx.

Owego, N. Y.—The contract for the construction of the reservoir to be built for the Owego Water Works Company has been let to the P. B. McGaghey Company, of Little Falls, N. Y., at \$10,000; the reservoir will be situated northeast of the village on the E. H. House property; the capacity will be over 1,600,000 gallons.

Syracuse, N. Y.—Thirteen contracts for laying sidewalks were awarded by the Board of Contract and Supply at a total cost of \$4,164, all the contracts being at prices ranging from 10 to 11 cents a square foot of surface. The largest contract was for laying a 5-foot walk on both sides of West Colvin street, from Onondaga Creek to Columbia avenue, awarded to Charles Whitney at \$2,270.50. Other contracts were awarded to the lowest bidders as follows: To the Onondaga Litholite Company, north side of Solvay street, from Onondaga street to Rich street, \$66.04; both sides Monroe street, from Grape to Orange street, \$350.25; to Philip Thomas, south side of Croton street, from Croton court to Renwick avenue, \$125.50; to the Salt City Paving Company, both sides Ashworth place, from University avenue to Pine street, \$360; east side of Rich street to Bellevue avenue to Onondaga Creek, \$152.60; James Barr, both sides of Hudson street, from Bellevue avenue to Onondaga Creek, \$342; to Albert Gaffey, north side of Otisco street, from South West street to Wyoming street, \$181.42; south side of Otisco street, from South West street to Wyoming street, \$151.19; south side of West Willow street, from Clinton to Franklin street, \$40.70; west side of North Clinton street, from West Willow to Noxon street, \$95; east side of Gertrude street, from Hawley avenue to Lodi street, \$147.40; both sides of First North street, from Pond to Kirkpatrick street, \$35.

Acting on the recommendation of the Board of Education, Randolph McNutt Company was awarded the contract for 242 adjustable school desks and thirty rear seats at \$912.80, and A. H. Andrews Company was awarded the contract for 600 portable assemblies chairs at \$850.

Troy, N. Y.—The Board of Contract and Supply, on motion of City Engineer Grimes, has authorized the readvertising of bids for the garbage disposal plant; the Mayor stated that bids received were not in accordance with the specifications; new bids will be opened.

Bids were opened for the combination chemical hose wagon for the Stanton Steamer Company as follows: Combination Ladder and Rhode Island Coupling Company, \$1,498; American La France Fire Engine Company, \$1,200; the Te Tray Company, Newark, N. J., \$1,595; Olympus Carriage Company, \$1,240; Joseph J. LeCompte, \$1,440. The bids were referred to the Commissioner of Public Safety and the City Engineer.

For resurfacing Third street, near Jefferson, the contract was awarded to George Hanna, who bid \$2.10 per square yard, without a foundation, and \$2.85 per square yard with a foundation.

Fort Caswell, N. C.—Government buildings at Fort Morgan and Fort Caswell, for erection of which Joseph Schad, Wilmington, N. C., was lowest bidder, will be as follows: One building of concrete; two buildings, solid concrete foundations, frame superstructure; all slate roof; for lavatory, mess hall and barracks; ordinary fireproof construction; hot-water heat; electric lighting; cost about \$90,000.—Louis P. Garrard, Captain and Quartermaster, U. S. Army, Mobile, Ala.

Carrington, N. D.—W. I. Gray & Co., Minneapolis, Minn., have been awarded contract for 6,000 feet 6-inch pipe, special hydrants and gate valves, at \$6,300.—H. L. Winterer, City Auditor.

Valley City, N. D.—William Smith has been awarded a contract for laying 449 feet of 10-inch clay pipe at an average depth of 8 feet on gravel soil for \$362.50. The wages of common labor are \$2 per day.—H. F. Halverson, City Auditor.

Dayton, O.—David Beard has been given the contract for paving of Wyoming street, from Ford to Main; the character of the brick to be used has not been definitely decided upon, but it shall be either Portsmouth or Carlisle brick.

East Liverpool, O.—At a special meeting of Council the contract for the hauling of garbage was awarded to John Martin, city, formerly Chief of Police. Mr. Martin's bid was 2 cents lower per can than that of his competitor, Rinehart Bros., of East Liverpool; he also agrees to furnish his own dumping ground.

Lima, O.—The Board of Public Service has let contract to W. F. Jameson & Co. for grading, curbing and macadamizing Cole street, from Lakewood avenue to the entrance of the City Park.—L. L. Crumrine, Secretary.

Lockland, O.—The Village Council has let contract to Schuberth & Wiefering, 329 Mill street, Cincinnati, for constructing cement or artificial stone curbs and gutters on Rutherford street.—C. E. Troy, Village Clerk.

Marion, O.—The contract for paving Silver street, from Leader street to the corporation line, a distance of about 4,000 feet, has been awarded to Hostetter & Dessen after a bid of \$26,707.

Midland, O.—The contract for the new municipal hall has been let to A. A. Smith, Midland.

Newton Falls, O.—The Board of Public Affairs will purchase 13,500 feet of pipe required for the water works from the United States Cast Iron Pipe and Foundry Company, Chicago, who furnish 4-inch pipe for \$22.60 per ton, and 6-inch and 8-inch pipe for \$21.85 per ton. These are said to be low figures compared with the price of pipe a few months ago, when it reached over \$30 per ton. The Massillon Cast Iron Pipe Company sent in the only other bid, which was slightly in excess.

Ten bids were received for laying the pipe, ranging from \$2,355 to \$7,800. W. J. Scholl & Co., of Youngstown, who were awarded the contract, will probably begin work in about two weeks.

Seven bids were received for furnishing hydrants and valves, the lowest from the Rensselaer Company of Troy, N. Y., who offered to furnish hydrants at \$22.50 each and valves at from \$6 to \$15 each. The contract was awarded to that company.

The entire cost of the work and supplies under the above contracts will amount approximately to \$8,000.

Portsmouth, O.—Monroe & Son have been awarded a contract for street paving at \$3,302.52. The items were as follows, the first price being for material, the second for labor and the third being the total: 1,934 square yards paving, tar filler, per square yard, \$1, 11 cents, \$1.11; 1,089 lineal feet straight curb, per lineal foot, 40 cents, 10 cents, 50 cents; 100 lineal feet circular curb, Scioto stone, per lineal foot, 40 cents, 40 cents, 80 cents; 66 lineal feet of edging, per lineal foot, 10 cents, 10 cents, 20 cents; 180 lineal feet of 15-inch D. S. Trifield sewer pipe, connection laid, per lineal foot, 35 cents, 10 cents, 45 cents; 1,200 lineal feet of 4-inch drain tile laid, per lineal foot, 2½ cents, 2½ cents, 5 cents; 180 cubic yards of sewer and drain tile excavation and backfilling, per cubic yard, material nothing, 35 cents, 35 cents; 2 manholes with castings complete, each, \$10, \$10, \$20; 4 catchbasins with castings complete, each, \$10, \$8, \$18.

Bids were received as follows by the Board of Public Service for furnishing material and constructing flood defense in District No. 1. Contract was awarded to Kelley Bros., of Portsmouth, at \$25,548 for reinforce-concrete work. Other bids on concrete wall: John B. McLane & Co., Newport, Ky., \$31,392; J. A. Grimes Engineering Company, Portsmouth, \$26,985; Phils. Wickerham, Portsmouth, \$45,113; Curtis & Shumway, Portsmouth, \$30,023; E. G. Naye Bros. Co., Portsmouth, \$32,940; W. H. Ringwald & Sons, Chillicothe, Ohio, \$37,212; Kaps Bros., Portsmouth, \$26,864, and S. Monroe & Son, Portsmouth, \$28,277.

Toledo, O.—The Asphalt Block Paving Company, succeeding the old Lake Erie Asphalt Block Paving Company, was awarded a contract for the paving of Stockwood avenue for \$14,333, Inlington to Central, by the Board of Public Service.

Uhrichsville, O.—The contract for constructing a bridge over Stillwater Creek has been awarded to W. M. Brode & Co., of New Comerstown, O., at \$20,798.—Clyde J. Knisely, County Surveyor.

Wadsworth, O.—E. McShaffrey & Son of Akron, were awarded the contract for the sewage disposal plant, to be built this summer. The price bid was \$4,706. This firm built the Ravenna disposal plant. The other bidders for the job were the following: Wildes & Davidson, Akron; T. W. Hill, Bellefontaine; Medina Concrete Company, Medina; E. W. Gibbons, Cleveland.

Warren, O.—The Board of Public Service has let contract for draining, curbing and paving with asphalt blocks, etc., Elm and North Tod streets, to Smith & Dennis, city, at \$7,880.77 and \$3,022.35, respectively.—Chas. B. Selby, Clerk.

Youngstown, O.—E. Diorio is low bidder for the Truesdale street pipe sewer at \$543.91; A. O'Horo for the Worthington street sewer at \$1,781.80, also for the Glenwood avenue brick sewer at \$3,828.50. Mike Horan is low bidder for the Canfield street grading at \$55.25, and B. J. Billeck for the Oklahoma street grading at \$523.80.

Altoona, Pa.—The following bids were received by the State Highway Department for the construction of (a) 8,030 feet of road from the Stonycreek Township line to near Geistown, Richland Township, (b) 4,050 feet in Stonycreek Township, (c) total of both sections of road: W. T. Pennock, Altoona, Pa., (a) \$27,770, (b) \$19,953, (c) \$47,724; Nelson-Meredith Company, Chambersburg, Pa., (a) \$26,503 and \$26,104, (b) \$12,880 and \$12,667, (c) \$38,744; E. A. Freshwater & Sons, Chester, W. Va., (a) \$33,892, (b) \$21,953, (c) \$55,846; Vipond Construction Company, Altoona, (a) \$25,622 and \$25,114, (b) \$13,325 and \$13,003, (c) \$38,117; John L. Elder, Ebensburg, Pa., (a) \$28,197, (b) \$19,229 and \$19,047, (c) \$46,895; Saupp & Drhew, Altoona, Pa., (a) \$23,224, (b) \$12,569, (c) \$35,891; J. E. Francis, Punxsutawney, Pa., (a) \$27,210, (b) \$13,725, (c) \$40,935; George W. Clark, Johnstown, Pa., (a) \$25,574, (b) \$20,852, (c) \$46,426; R. A. Reighart, Johnstown, (a) \$24,824 and \$24,524, (b) \$19,386 and \$19,136, (c) \$43,659.

Boswell, Pa.—The contract for the erection of a municipal building at Boswell was let by the Council to Ira Holospole of Boswell, at his bid of \$4,625, which was the lowest bid submitted. The building will be rapidly pushed to completion. The structure will be 45x70 feet, and will contain the borough lock-up, election room, Council chamber, and quarters for the Fire Department.

Easton, Pa.—Samuel Getter, city, has been awarded contract to erect extension to the Central fire station, at \$3,720.—John Mutchler City Clerk.

Harrisburg, Pa.—The contracts for paving two streets were awarded at a joint session of Councils and one contract was laid over because the people concerned are now not anxious for the paving of their street. The streets to be paved are State, from Tenth to Thirteenth, 5,300 square yards, with 3,200 feet of curbing, and Crescent street, from Mulberry to Berryhill, 5,800 square yards, with 3,200 feet of curbing. A petition from the property-owners asked that State street be paved with vitrified brick because of the grade between Cameron to Thirteenth street. The Barber Company was the lowest of the bidders, bidding \$1.97 a square yard for asphalt, but the award was given to the Stucker Bros. Construction Company, which bid \$1.99 for Pittsburg-Buffalo vitrified brick; total, \$13,715. This company will furnish granite curbing at 99 cents per lineal foot.

When the question of awarding the paving work on Crescent street was taken up, Mr. Oster moved that the work be given to the Barber Company because it used limestone concrete. Then followed a discussion of the old limestone-brownstone controversy in which the merits of the two kinds of concrete were gone over. Mr. Hedrick said he understood the Central Pennsylvania Traction Company used only limestone concrete about its ties, no matter what company did the paving. The Warner-Quinlan Company uses the brownstone and as it was the lower bidder it got the contract. Its bid was \$1.93 for paving and 94 cents for granite curbing; total, \$14,412; the Barber Company bid was \$14,594.

The contract laid over was that for the paving of Thompson street, from Fifteenth to Seventeenth streets. A petition from the property-owners said they did not want that street paved just now, and, upon motion, it was laid over.

The report of the Special Committee on Printing was received from Chairman Smith and adopted insofar as it recommended that contracts be awarded to the lowest bidders. The lowest bidders were the Telegraph, Star-Independent, Keystone Printing and Heading Company and Courier Publishing Company. In a number of instances the Telegraph, Courier and Keystone companies bid the same figures. Mr. Snavely moved that the Telegraph Publishing Company get all such contracts, and the motion carried. In one small bid the Courier won out over the Keystone Printing and Binding Company, a tie bidder.

Lock Haven, Pa.—The Water Committee has recommended and A. C. Candor & Co., agents for R. D. Wood & Co., have been awarded contract for furnishing iron water pipe at their bid of \$23.20 per ton of 2,000 pounds for the 24 and 12-inch pipe, and \$23.40 for the 10-inch pipe, and fittings at \$2.50 per 100 pounds, all f. o. b. to Lock Haven, which was the lowest bid; also for furnishing hemp at \$6.20 per 100 pounds f. o. b. to Lock Haven, they being the only bidders on this material. The contract for pig lead has been awarded to W. A. McClellan & Co., of Arden, N. Y., at \$4.60 per 100 pounds, they being the lowest bidders.

The bids of all the competing firms for the

500 feet of 24-inch pipe, 4,800 feet of 12-inch pipe and 1,150 feet of 10-inch pipe, per ton, of 2,000 pounds f. o. b. cars at Lock Haven, were as follows: Van Dyke & Co., \$24.75 for all sizes; A. C. Candor & Co., \$23.20 for 24 and 12-inch and \$23.40 for 10-inch; W. A. McClellan & Co., \$23.50 for 24 and 12-inch and \$24 for 10-inch; Lynchburg Foundry Company, \$23.90 for 24 and 12-inch and \$24.75 for 10-inch; E. Keeler Company, \$25.73 for 24-inch and \$26.77 for 12 and 10 inch; Donaldson Iron Company, \$22.98 for 24-inch (slightly defective) and \$23.87 for 12 and 10-inch; United States Cast Iron Pipe & Foundry Company, \$23.70 for all sizes. The bid of each firm for fittings was the same, 3½ cents per pound.

The bids for pig lead per 100 pounds, f. o. b. this city, were as follows: Van Dyke & Co., \$4.95; A. C. Candor & Co., \$4.99; J. H. Fredricks & Bros., \$5; W. A. McClellan & Co., \$4.60.

In this connection it will be interesting to note that the price at which the city is purchasing the pipe is about \$12 per ton less than the prices which prevailed several years ago.

Mill Hall, Pa.—E. M. Good, of Lancaster, has been awarded the contract for the construction of a macadamized State road through this place at \$7,768, and also the contract for the construction of the Lamar Township road, near here, at \$12,427.

New Brighton, Pa.—The contract for erecting the State armory at New Brighton has not been let, as the deed for the site has not been secured. Martsol Bros., of New Brighton, were the lowest bidders. Their bid was \$22,000 for one plan and \$20,000 for the other. The other bids were \$5,000 or \$6,000 higher.

Rankin, Pa.—The contract for a fire engine house has been let to the George M. Hall Company of Homestead for \$8,778.—C. Koeman, Borough Secretary.

Rittsville, Pa.—Doyle & Co. have secured the contract for erecting a sewage disposal plant at the State Homeopathic Hospital for the Insane near here, at about \$30,000.

Reading, Pa.—John F. Albrecht and Adam H. Leader, city, have been awarded contract by the Board of Water Commissioners for construction of slow sand filters for Bernhart water supply, at \$75,316.59, with the filter house faced with granite, while the firm bid \$72,080.33, with the filter house faced with Indiana limestone. Other bids received, including the two designs of filter houses, follow: David Peoples, Philadelphia, \$33,494.05 and \$81,510.55; Millard Construction Company, Philadelphia, \$87,599.03 and \$84,299.03; H. E. Ahrens Company, city, \$81,863.90 and \$78,623.90; Blackstaff Engineering Company, Philadelphia, \$97,598 and \$91,873; Bennis Construction Company, Philadelphia, \$94,605 and \$92,229; Robert C. Storrie, Philadelphia, \$74,318.20 and \$73,812.20; William Nolan, Jr., Sinking Springs, \$90,183.74 and \$87,310.74; S. W. Chiles, South Bethlehem, \$81,069.20 and \$79,169.20; L. H. Focht & Son, city, \$85,037.64 and \$81,651.64; New York Continental Jewel Filtration Company, New York City, \$92,757.95 and \$90,757.95; Fehr & O'Rourke, city, \$80,821.30 and \$78,339.30; James E. Bunting and Roberts, Bull & Co., Flushing, N. Y., \$74,909.90 and \$71,509.90, rejected as irregular, as Roberts, Bull & Co., a corporation that did not affix their corporate seal to the bid nor to the bond.

The details of the successful bid follow: 42,500 cubic yards excavation, 60 cents; 4,800 cubic yards concrete masonry, \$4.48; 40 cubic yards brick masonry, \$7.20; 1,350 cubic yards broken stone or gravel and coarse sand for under drains, \$1.70; 6,530 cubic yards placing filter sand, 45 cents; 200 cubic yards cinder filling, \$1.10; 400 square yards vitrified brick gutters, 29 cents; 3,000 square yards roadway, \$1.15; 285 square yards walks, \$2; 19,300 square yards sodding, 22 cents; 1,010 feet 18-inch vitrified pipe, 82 cents; 144 feet 15-inch pipe, 44 cents; 152 feet 12-inch, 30 cents; 5 feet 10-inch, 25 cents; 165 feet 8-inch, 23 cents; 100 feet 6-inch, 10 cents; 8 feet 4-inch, 20 cents; 3,240 feet 6-inch underdrains, 12 cents; 2-inch vitrified drains for vaulting, complete, \$210; stone steps, complete, \$175; filter house, faced with granite, \$12,427.33; filter house, faced with Indiana limestone, \$9,191.07.

Scottdale, Pa.—The Scottdale Borough Council met to open bids for 3,200 feet of No. 1 24-inch sewer pipe, necessary to complete the lower part of the Anderson Run sewer, which will give the Pine Tree section of town sewerage facilities, and the following quotations were read: The D. J. Kennedy Company of Pittsburgh, 74½ cents per lineal foot; C. A. Brilhart of Scottdale, 83½ cents per foot; J. R. Dick of Scottdale, 75 cents per foot; Eicher & Graft of Scottdale, 74 15-16 cents per foot, and Kaul-Oberkirch Company of Toronto, O., 69½ cents per foot, all for No. 1 fire clay pipe subject to the approval of the Borough Engineer. On motion, Burgess William Ferguson was instructed to write that a representative of the last-named firm enter into an agreement to deliver the 3,200 feet of pipe at the prices quoted.

Smethport, Pa.—Louis H. Gipp, Buffalo, N. Y., has the contract for 13,000 yards of brick pavement.

Somerset, Pa.—The County Commissioners have let contracts for the following bridges:

Nelson-Meredith Company: Reinforced concrete bridge over Higgins Run, in Quemahoning Township, 30-foot span, 12-foot roadway, on road leading from Hooversville to Pittsburg turnpike, \$2,400; stone arch bridge over Clear Shade Creek, in Shade Township, on road from Windber to Crumb, 46-foot span, 12-foot roadway, \$1,225; stone arch bridge over Roaring Fork Creek, where road from Shade furnace road to Hageve crosses the creek in Paint Township, 36-foot span, 12-foot roadway, \$920.

York Bridge Company: Steel bridge over Benscreek, near Thomas' Mill, where the public road (Centennial road) leading from main road from Jerome to Jennertown to the Somerset and Johnstown pike crosses the stream, in Conemaugh Township, 40-foot span, 12-foot roadway, \$1,225.

Penn Bridge Company: Reinforced concrete arch over South Fork of Quemahoning Creek, in Jenner Township, where road leading from Beulah road to Dunmeyer road crosses said creek, 35-foot span, 12-foot roadway, \$900.

Frank Bicchieri: Reinforced concrete arch over Quemahoning Creek on the Johnstown turnpike, near Spiesville, in Lincoln Township, 30-foot span, 12-foot roadway, \$7.25 per cubic yard.

Washington, Pa.—The W. E. Howley Construction Company, of Pittsburg, has been awarded contract for the construction of three miles of the Dry Run road; N. C. Hunter, city, has been awarded contract for three miles of the Labrotory-Lone Pine road, and the Hallam Construction Company, city, has been awarded the contracts for the construction of the Washington-Meadowlands road and the Houston-Westland road, the total of the latter being about 3½ miles; each of the contracts was taken at about \$38,000.

Wilkes-Barre, Pa.—Schmidt & Dunn, Wilkes-Barre, have been awarded the contract by the city at \$53,000 for resurfacing the city streets with asphalt.

Pierre, S. D.—Bids for the construction of sewers were received by Council as follows: P. C. Construction Company, Pierre, \$13,742; G. W. Haggart, Fargo, N. D., \$13,629; C. A. Young, Pierre, \$12,690; O. Englund, Pierre, \$13,590; Ferd Sickle, De Grey, S. D., \$11,567 (awarded contract); McMullen & Co., Pierre, \$11,594.

Fort Worth, Tex.—To the Missouri Valley Bridge Company the Commissioners' Court has let the contract for the construction of a bridge across Mill Creek, four and one-half miles south of Azle. The cost will be \$533.50; the bridge will be a single steel span of 50 feet, with a 20-foot wooden approach; construction will begin at once.

Bluefield, W. Va.—Mercer County has awarded the contract to A. D. Stone & Co., Roanoke, Va., at \$24,987 for grading and macadamizing 2.4 miles of county road.

Farmville, Va.—The Supervisors of Prince Edward have let the contract for building about 2 1-3 miles of macadam road from out of Farmville to the Luck Construction Company, the lowest bidder, at about \$10,235.

Huntington, W. Va.—The contract for the laying of about 100 miles of 20-inch pipe line from this city to Cincinnati, O., has been awarded to the James G. Corcoran Company, 4 Smithfield street, Pittsburg, Pa. The line will be built for the Columbia Gas and Electric Company of New York City, and will be completed this year if possible. Work will be started at once. The National Tube Co., Frick Building, Pittsburg, Pa., has been awarded the contract for the wrought-iron pipe that will be used in building the line.

Milwaukee, Wis.—Edward O'Donnell was awarded the contract at \$2.07 per foot for laying a 36-inch water main through the East Side; cost, about \$29,808.

Nekoosa, Wis.—F. E. Kaminski, Berlin, Wis., has the contract, at \$5,767, for the construction of 8 to 20-inch sewers.

Rhineland, Wis.—The McGrath Construction Company of Green Bay has been awarded contract for 18,890 square yards 4-inch macadam, on 6-inch rock foundation, at \$1 per square yard, 7,330 cubic yards sand excavation at 35 cents, and for setting 1,020 lineal feet concrete combined curb and gutter, at 65 cents; total, \$25,475; the McCugo Construction Company bid \$28,066; S. B. Stanfield, \$26,995; Forrester & Feyan, \$27,500; and Dunn & Mead, \$28,500.—George C. Jewell, Comptroller.

Racine, Wis.—John O. Jones was awarded the contract, at \$37,128.12, for 27,703 square yards of brick paving on Washington avenue.

Two Rivers, Wis.—Walter O. Bahr, Manitowoc, was the successful bidder for laying 1,070 feet of 4-inch water pipe, at 28½ cents per foot for Two Rivers.—J. G. Weilep, Secretary Water and Light Commission.

Montreal, Que., Can.—Michael Dineen has been awarded the contract for the first section of the Sherbrooke street sewer, from Delormier avenue to St. Denis street, at \$65,000, and A. Bellehumeur for the Valois street sewer, at \$5,180.

Proposals

CONSTRUCTING BRIDGE

Notice to Contractors

Sealed bids will be received by the Board of Public Service of the City of Springfield, State of Ohio, at the office of the Clerk of said Board, Room 5, City Building, until 12 o'clock noon of Tuesday, July 28, 1908, for the furnishing of the necessary labor and material for the constructing of a bridge across Buck Creek and the Anstead-Burk Company head race at Sherman avenue and Nelson street, in accordance with the plans and specifications therefor, now on file in the office of the Department of Public Service.

Each bid must contain the full name of every person or company interested therein, and be accompanied by bond with sureties to the approval of the Board, in the sum of \$1,000, or a certified check, in like amount, upon some solvent bank, as a guarantee that if the bid is accepted a contract will be entered and its performance properly secured.

The envelope or wrapper containing said bid must be plainly marked "Bid for Constructing Bridge over Buck Creek and the Anstead-Burk Head Race."

The right is reserved to reject any and all bids.

By order of the Board of Public Service.
(3-4) WM. H. MAHONEY, Clerk.

STREET PAVING

Rome, Ga.

Proposals will be received by the undersigned until 4 o'clock p.m., August 4, 1908, for grading, curbing and the paving of certain streets with either wooden block, vitrified brick, granite or bitulithic material. The work will embrace approximately the excavation of 12,000 cubic yards of earth, furnishing and setting 12,000 linear feet of granite curb and concrete foundations and surfacing 41,000 square yards of pavement. Specifications may be procured and plans and profiles seen at the office of the Resident Engineer, Rome, Georgia, and general information from the undersigned.

Proposals will be opened publicly with the usual rights reserved.

BOARD OF PUBLIC WORKS, ROME, GA.
C. E. McLIN, Chairman,
Rome, Ga.

HAZLEHURST AND ANDERSON,
Engineers, Candler Bldg., Atlanta, Ga.

WATER WORKS SYSTEM

Nowata, Okla.

Bids will be received by A. H. Gillespie, Recorder, Nowata, Oklahoma, and by him publicly opened July 22, 1908, for the purchase by the city of Nowata of all material required in construction of municipal water works system. Specifications may be had by addressing O'Neill Engineering Co., Dallas, Texas.

AIR COMPRESSOR AND RECEIVER

Pensacola, Fla.

Proposals will be received by the Board of Bond Trustees of the City of Pensacola, Florida, at its office in the City Hall, up to 12 o'clock noon of the 30th day of July, A. D. 1908, for the furnishing, delivering and erecting one air compressor and receiver. The compressor to be capable of compressing sufficient air to lift 2,000,000 gallons of water from thirteen driven wells to the reservoirs.

The Board reserves the right to reject any and all bids. General specifications may be obtained from the Consulting Engineer at his office in Wilmington, Delaware.

By order of the Board of Bond Trustees.

R. M. BUSHNELL,
Chairman.

T. CHALKLEY HATTON,
Consulting Engineer. (4)

SEWERS

Webb City, Mo.

Pursuant to an order from the Council the undersigned will receive sealed proposals until 5 o'clock p.m., August 3, 1908, for the construction of sewers in Sewer Districts Nos. 32 and 33. The work to be done according to the plans and specifications on file in the office of the City Clerk. The work will be paid for in special tax bills issued against the lots and parcels of ground liable therefor. Each district will be a separate contract. A certified check for \$100 must accompany each bid, which will be forfeited to the city in the event that the successful bidder does not enter into contract with good and sufficient bond within ten days from the date of the award. Bids will be opened in the presence of the Mayor and Council, at the regular meeting on August 3, 1908. The Council reserves the right to reject any and all bids.

W. E. SMITH,
City Engineer.

STANDPIPE OR RESERVOIR

Grand Haven, Mich.

The City of Grand Haven, Mich., is about to erect a standpipe or reservoir on top of a hill 1,500 feet from pumping station; size to be from 50 to 75 feet in diameter, 25 feet high; to be built of steel and erected on a concrete foundation; to be connected with a 12-inch cast iron pipe from pumping station. Pipe to be laid below frost line, approximately 4½ feet deep.

Bidders are expected to make plans and specifications from a sketch prepared by the Superintendent of Public Works, Grand Haven, Mich.

WALDO FRANCISCO,
Superintendent.

CAST IRON PIPE SPECIALS

Office, Commissioners, District of Columbia,

Washington, July 13, 1908.

Sealed proposals will be received at this office until 12 o'clock, noon, Saturday, August 1, 1908, for furnishing cast iron water pipe specials. Forms, specifications and necessary information may be obtained at Room 429, District Building, Washington, D. C.

HENRY B. F. MACFARLAND,
HENRY L. WEST,
JAY J. MORROW,
Commissioners, D. C.

WATER WORKS AND ELECTRIC LIGHT SYSTEMS

Readvertisement

Wahoo, Neb.

Sealed proposals will be received at the office of the City Clerk, in the City of Wahoo, Saunders County, Nebraska, until noon on the 3d day of August, 1908, for furnishing labor, materials, machinery and apparatus for constructing and installing a complete water works system for the City of Wahoo.

Sealed proposals will be received by the City Clerk of Wahoo until 8 o'clock p.m. on August 4, 1908, for furnishing materials, machinery and apparatus for constructing and installing an electric light system for the City of Wahoo.

All of the above to be in strict accordance with the plans and specifications on file in the office of the City Clerk, Wahoo, Nebraska.

ED. LEHMKUHL,
Mayor.

L. H. LYLE,
City Clerk.

SEWERS

Portsmouth, Va., June 20, 1908.

Sealed proposals will be received at the office of the City Clerk, Portsmouth, Va., addressed to "Sewerage Committee," until 8 p.m., July 28, 1908, for furnishing all materials and labor in constructing a Sanitary Sewerage System for the Fifth Ward, this city.

The work consists of about nine miles of pipe sewers from 24 to 8 inches diameter, besides 4-inch house laterals, cast iron discharge and air pipe, with manholes and flush tanks.

Plans and profiles can be examined and specifications, instructions and forms of proposal can be secured at the office of the City Engineer.

Bids must be made in strict accordance with the Instructions to Bidders, attached to the specifications.

The right to reject any or all bids is specially reserved.

A. AUG. BILISOLY,
WM. JONES WILLIAMS,
Chairman Sewerage Committee.

BASCOM SYKES,
City Engineer.

SEWERAGE SYSTEM

City of Boonville, Indiana, will receive bids on August 3, 1908, for a \$60,000 sewerage system. Write City Clerk.

WANTS

SITUATION WANTED by a man experienced in steam engineering, hydraulics and water works construction; also as salesman. Address P. O. Box 710, Mobile, Ala.

WANTED—Catalogs and booklets pertaining to municipal and general engineering. D. L. Yarnell, Assistant City Engineer, Le Mars.

ENGINEER (28), desires position anywhere; six years' experience in construction of tunnel, power house, sewer, road and general municipal work. Executive ability; well recommended. Address "X. A. 26," Municipal Journal and Engineer, New York.

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